ISSUE SEVENTY-ONE UK: £2.25 (rec) US $5.00 Canada $5.95

DOCTOR WHO

IN-VISION

WARRIORS OF THE DEEP

THE MAKING OF A TELEVISION DRAMA SERIES

Production
Origins, Script 3
Script-Editing 4
Director and Team 5
Set Design, Costumes 6
Make-Up, Visual Effects 10
Studio Diary 11
Post-Production 17
Music, Special Sound, Cuts Transmission ,Continuity, Trivia 18

Features
Borderline 2
Mat Irvine 8
Review 13
What the Fanzines Said... 15
Audience 17
Credits 19
References 19

IN-VISION
ISSN 0953-3303
Issue 71
First published April 1997

Editor: Anthony Brown
Assistant Editor: Stephen O'Brien
Publisher: Jeremy Bentham

Contributors: Paula Bentham, Richard Bignall, David Brunt, David J Howe, Richard Landen, Simon Lydiard, Andrew Martin, Diane McGinn, Andrew Pixley, Adrian Rigelsford, Bob Stanley, Stephen James Walker, Martin Wiggins.

Cover: Steve Caldwell
Graphics: Mark Hadlett

Format © Justin Richards, Peter Anghelides, June 1986
Doctor Who © BBC television 1983, 1996

Origination: GLA Productions
Colour: Banbury Repro
Printers: Banbury Litho

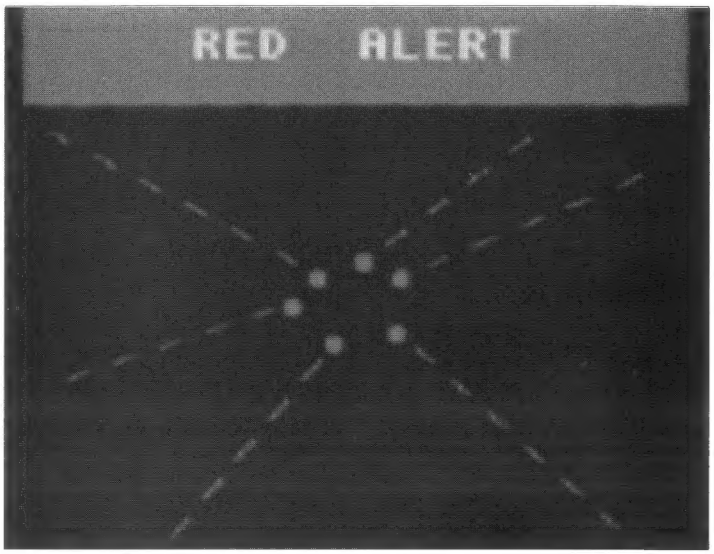
Editorial address:
10 Gablefields
Sandon
Chelmsford
Essex
CM2 7SP

E-mail:
abrowne@cix.compulink.co.uk

Subscriptions: *Please note new rates: 8 issues for £21.00 (UK only: add £2 for mailing in card envelopes); Canada £26, USA £26/$39, Australasia £31.*
Cheques payable to:
Jeremy Bentham
13 Northfield Road
Borehamwood
Hertfordshire WD6 5AE
United Kingdom

"In the old days they sent men out onto the battlefield to get shot at. Now, it's all battle computers and missiles. I suppose I'm lucky. So why don't I feel it?

"Father was a military man: worked his way up through the ranks from sapper to Admiral. Married a signals operator and had 3 children, all boys. Guess who was the youngest? Unlike my brothers I had absolutely no interest in the military, which pleased Mother since it meant there would be at least one son left alive to give her grandchildren. As for Father...to him I was just the runt of the litter. He treated me like dirt and gave me no encouragement, no compassion. He did make several attempts to get me interested in warfare but I just couldn't see the point of it. To me, war just means sacrificing thousands of lives for the sake of winning an argument. You understand, don't you?



"So, whilst my brothers went to the Academy to become officers I stayed at home and concentrated on computers. Nothing dangerous about computers, so I thought. I enjoyed programming them, and I found it was something I was good at. I was Mother's pride and joy: "My son, the scientist" she used to call me, to which Father would invariably reply "He's no son of mine!"

"No matter how many years go by, rejection by your own father hurts just as badly. I came to the decision that if I wanted acceptance, I had to bite the bullet and join up. Why the Academy? It was my eldest brother who told me that by going there I could still concentrate on computing whilst undergoing military training. It sounded like a good deal, so I took it. That was two years ago. My combat training didn't last long: I wasn't particularly good at it, so I just got the bare essentials. Enough, I was told, for me to be loosely classified as a sailor. That didn't matter. I mean, it wasn't as though there was going to be a war, would there? Data Ops was different: that was something I was good at, and I was working with the latest technology which gave me the feeling of ...well I felt like Babbage building his Difference Engine. Like a pioneer! Of course Father wasn't impressed at first. "Not proper sailoring" he said. But as time went on, he gradually took more of an interest in my work. He would never admit any pride to me, although Mother said his attitude to me had improved. I was still the junior compared to my brothers, who at this time were officers aboard Sea Bases, but I knew that I had managed to repair one or two bridges.

"Everybody knew the political situation was fragile, even at the best of times. But I never realised how much it would actually deteriorate. I volunteered for the Synch Ops Programme just before things worsened. I wasn't thinking of the Programme in military terms: I know I should have done, but I was blinded by the science of it all. I mean, this is the ultimate man-machine interface, with endless possibilities for medicine, science, whatever. Including total annihilation...before I knew it, we were at war and I found myself posted here to Sea Base. All right, I knew that was part of the training but I still wasn't looking forward to it. Having three Red Alerts on my first day didn't help either! I'd probably have been carted off to the nuthouse by now if Karina hadn't seen me looking lost and took pity on me. That's Karina who's stationed in the Control Room, yes. Being the junior member of the crew she had been in my position and understood what I was going through. She was soon showing me who's who and what's what - do I like her? Yes, I suppose I do. Karina is a very good friend to me and I don't know what I'd have done without her. We're going to watch a film after I've finished here. One of those "lovable animal" films which she likes and I don't, but that doesn't matter.

"If anything happens to Michaels - not that anything is going to happen to Michaels. I mean, he won't leave his cabin without going around at least twice to make sure everything is turned off; and he pops so many vitamin pills I swear you can hear him rattle! But if anything does happen...the Synch Operator can decide the fate of millions of people, and I couldn't handle that responsibility. No matter how much technology and automation there is down here, in the end it all comes down to one man and a big red button. I don't want to be that man.

"The last contact I had with the family was two days ago, just before the communications blackout. Mother was fine, if concerned about my well-being. You know, "You look so thin! Are they feeding you enough?", that sort of thing. I haven't told her any of my feelings about being here: she looked so pleased to see me and I didn't want to worry her any more. Father spends most of his time at HQ these days planning battle tactics, so Mother is in the rôle of Navy Widow and has enough troubles of her own. She did brighten up when I told her about Karina: I said we were just friends but she's already planning the wedding and thinking about knitting baby clothes! As I said, Father was away, but apparantly he's been boasting to his fellow officers about his son being "at the forefront of military technology". Mother also said that he wants to have a chat with me soon about my work and how life is here. If only he knew...I can't tell him my problems, not after all the effort I've made to settle our differences. We won't be having that chat for the forseeable future...if for some reason I don't see Father again, at least he will have been proud of me, which I suppose is what I've really wanted all along.

"I've got to tell someone about my state of mind, though; and better that it's someone like you."

Like the good doctor she was, Solow remained impassive as she wrote up her notes on Maddox. She did however allow herself a wry smile as she pondered the irony of the situation: in spite of his fears and beliefs, the conclusion and outcome of the conflict would be decided by Maddox. Solow re-read her diagnosis: "Insecure and unstable personality. Is unsuitable for anything other than light duties." But, she thought, most suitable for our needs.

BOB STANLEY

On Thursday June 9th 1983 Margaret Thatcher's Conservative government was elected for a second term by a landslide. There'd been no need to go the the country so early, as Thatcher's five year term had a year to run. But, with the Falklands victory boosting her popularity and infighting bedevilling Michael Foot's Labour Party, Mrs Thatcher decided in mid-May 1983 that her chances for a second period in power would be best served by calling a snap election in June.

Normally such political comings and goings in the real world would have no impact whatsoever on the universe of Doctor Who. The 1983 election was different, however, because it had not been foreseen by BBC Programme Planning, who prepared their studio rosters up to a year in advance. A snap election meant instantly clearing a whole studio for nearly a month to allow day-by-day coverage of the campaign. O.B and film unit crews were put on stand-by to travel the length and breadth of the country, and producers throughout the BBC were warned their own schedules would inevitably be affected.

For Doctor Who the choice was stark choice. Either pull work on the first story forward by nearly a fortnight to take advantage of an available studio, or lose the block entirely and truncate the season. Having lost his Dalek finale for season 20 John Nathan-Turner was adamant he would not countenance the latter option. WARRIORS OF THE DEEP would enter the recording studio a week earlier than planned regardless of consequences.

Given the less than warm reception generally accorded serial 6L, it would be easy to blame this show's faults entirely on its hasty shunt forward, but that would involve to ignoring many other sources of problem and acrimony. Basically WARRIORS OF THE DEEP became a pariah, loathed by everyone who worked on it, with everyone else being at fault for the poor quality of the finished product.

It unquestionably provided Peter Davison's Doctor with a below par season opener and, by his own admission, cemented the decision he took shortly after production wrapped to announce his retirement from the title role. As with William Hartnell and Patrick Troughton, Peter Davison would be a three season Doctor.

So what went wrong? Was it the script? The production? Was it casting and performance or simply a bad case of 'force majeure'? As with anything that depends upon a whole web of talent, timing and an inter-dependency of skills, the answer cannot be traced to one single cause. As this account will attempt to show WARRIORS OF THE DEEP became an unfortunate victim of bad short and long term management at several levels, which left it poorly equipped to cope with unexpected changes of plan.

ORIGINS:

In his first year as producer John Nathan-Turner had concentrated on building a season around changes to the central cast. Year two was spent establishing the new Doctor, and in year three he brought back friends and enemies from the past. This year he decided the focus should be on monsters: new and old. Each story would have something scaly, shiny or mechanical slithering, lurching or gliding out of the darkness.

One idea discussed between himself, Eric Saward and Ian Levine was something never before attempted in the series; a team-up between two famous and distinct monsters. This discussion reportedly took place during the summer of 1982, around the time Johnny Byrne's season 20 story, ARC OF INFINITY was in studio. Accounts fail to record who else was privy to that discussion, but on September 10th that year Byrne received a commission to expand his story breakdown for WARRIORS OF THE DEEP into a full set of scripts.

One of Saward's beliefs, having watched videos of many past stories, was that **Doctor Who** worked best when a small party of human(oid)s in a remote environment became isolated and threatened by an powerful invader from outside. It was a theme which had worked well in the script-editor's own story, EARTHSHOCK, and which would recur a lot in season 21. Certainly the elements were reflected in guidelines fed to Byrne.

Accounts are vague as to who exactly first proposed reviving Malcolm Hulke's reptilian creations from the Seventies, but the writer himself recalls viewing tapes of **DOCTOR WHO** AND THE SILURIANS plus THE SEA DEVILS while researching his story, and is generous in his praise for Malcolm Hulke's work. Both were, "well plotted and well paced" he told Marcus Hearn in a 1993 interview for ***Doctor Who Magazine***. Byrne also admitted to viewing EARTHSHOCK, also an example of **Doctor Who** storytelling he admired, and went as far as saying so to Eric Saward.

He expressed a wish to write an action-adventure serial in the same mould. "Fine" replied the script-editor. "As long as you can make it different... I used to tell everyone who came through the door they could have twelve speaking parts, possibly 20 to 30 extras, and ten sets as long as they're not too big"

One contribution Byrne wanted to add to all this myth perpetuating was making the Doctor more of a background figure to events rather than the hinge-pin or instigator he had been in the past, particularly during the Baker and Pertwee eras. For the background to his storyline, Byrne turned to one of his trusted sources of inspiration, the newspapers.

The early Eighties were a time of great uncertainty, with the possibility of nuclear war ever-present. The Russians were continuing their occupation of Afghanistan and U.S President Reagan was rattling the twin sabres of smart-technology missiles and 'Star Wars' defence systems. BBC2 was in pre-production on its factional play about atomic warfare, **Threads**, and over in the States work was beginning on Nicholas Meyer's big budget TV movie about nuclear Armageddon, **The Day After**.

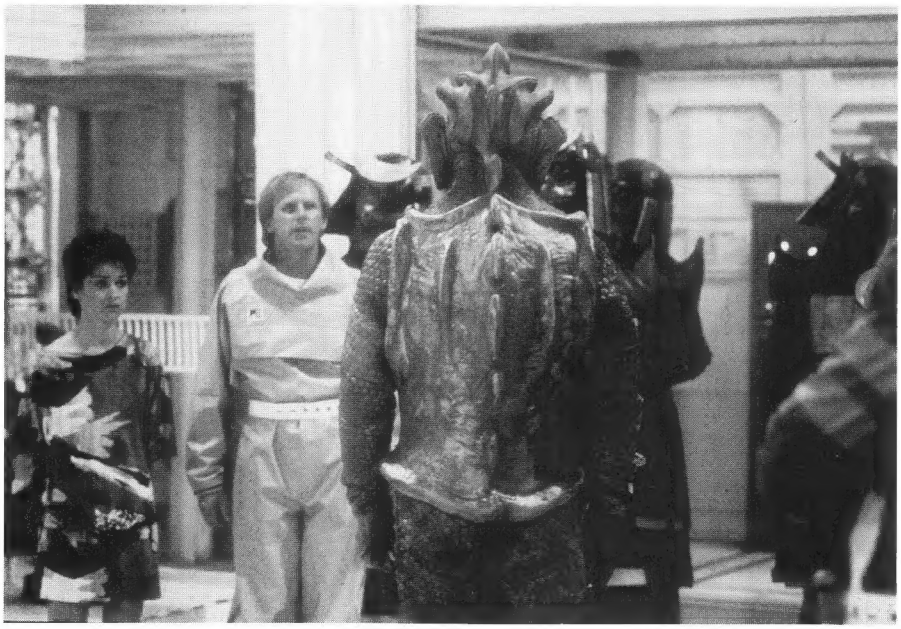
Johnny Byrne opted to set his his story exactly one hundred years into the future, in a period where vast arsenals of orbiting weapon platforms are policing the Earth, controlled by military stations such as Sea Base Four. "One of the problems military planners face," he told ***Doctor Who Magazine***, "is can you rely on a nuclear weapons operator to carry out instructions when you give an order? After all, they know they're blowing up their families, their countries and their whole world...

"In a vain attempt to keep the human dimension in the conflict, and out of the control of the computers, they had an intermediary between themselves and the machines. This was an idea that had stayed with me since I worked on a **Space 1999** story (by Christopher Penfold) called THE GUARDIAN OF PIRI. This was in no way connected and was a different situation, but there was this character who was logged in to computers in this way".

SCRIPT:

Johnny Byrne has always maintained the link between WARRIORS OF THE DEEP and his work on **Space 1999** was very tenuous, but there is evidence to suggest otherwise.. Interviewed recently by Peter Griffiths for ***Doctor Who Magazine***, Director Pennant Roberts remembered the writer telling him one day during shooting, "I'm really enjoying this, Pennant. It's so much better than it was last time".

In the original scripts, Sea Base Four is described as a circular installation, as was Moonbase Alpha. Expeditions from the base are undertaken in two man Probes, just as the Alphans flew twin cockpit Eagles. At the hub of the establishment is the bridge complex which incorporates the computer unit. Vorshak commands aided by his number two, Nilson, with fellow bridge officers Bulic, Security, Michael, a computer technician linked to the system by a com-link implant, and an Asian female communications officer named Karina. In charge of the medical wing is another female office, Doctor Solow, although in fairness to the writer Byrne's storyline originally lists Solow as simply "an intense, elderly



psychic surgeon". Alpha Moonbase correspondingly had Koenig in command with Bergman as his backup. Main mission's officers were Morrow, Security, Kano the computer technician with a com-link implant in his head, and a Eurasian female communications officer, Sandra Benes. Doctor Helena Russell supervised the medical facility.

Despite strongly similar character profiles, Johnny Byrne had *Alien* in mind for the interior design of the Sea Base. He imagined an artistic cross between The Nostromo and the rusting, cramped corridors of a submarine., populated by a professional team of specialists made war weary by their constant subjecting to computer triggered simulation exercises..

One major difference between the submitted and camera scripts of part one is that originally the Probe sent out to investigate the Silurian scout ship was manned by a four strong crew of three males and one female, the pilot's name being Hanson. Various scenes unfolded of the vessel closing on the unidentified submersible before being attacked by the Myrka and destroyed. In homage to THE SEA DEVILS, the Myrka is only seen in part one as a shape peering in through one of the cockpit windows. Byrne describes the monster as, "...an armed, slimy body moving past the port hole. The creature is seven feet high, vaguely man-shaped, its face part fish, part beast. It has a slimy, armoured hide, massive clawed hands."

Harking back to Jon Pertwee's first encounter with the reptile folk, Johnny Byrne names his Silurian leader as Icthar, suggesting he is one of the triad who ruled the nest underneath Wenley Moor. However, while Hulke gave them names in his subsequent novelisation, at no point during the teleplay were any Silurians called by name. The implication is that Icthar must be the scientist from that previous tale, being the only central Silurian not visibly killed on screen, though his relationship with the Doctor is hardly the deep friendship implied by WARRIORS OF THE DEEP.

It is also established that Silurians have greater intelligence than their marine cousins. The analogy is that of a bee colony; the Silurians are the warrior strategists, the Sea Devils less intelligent but more physically agile drones.

Another of the briefs handed out to Byrne was to include an underwater sequence in his screenplay. Having seen footage from all the surviving aquatic-orientated stories John Nathan-Turner believed the element had been poorly exploited in **Doctor Who**. Ealing film studios had a water tank and the one day use of an underwater film crew would not be beyond the series' budget so early in the season.

Byrne delivered his first draft scripts sometime in November and then vanished, just as he had done on THE KEEPER OF TRAKEN. This time around it was a job in America that had beckoned, and Byrne could not afford to pass up such an opportunity.

SCRIPT-EDITING: Eric Saward was less than impressed by these initial drafts. He recalled his feelings in an interview for *DWB* in 1988. "Johnny used to come back with epic, over-long scripts which you'd then have to start hacking away at, rewriting masses while trying to keep the story. Unlike Bob Holmes, who used to give the writers a story and then rewrite it anyway because it didn't work, I would try to be faithful to the original story, and try and make it work. That was my mistake. I should have rejected much more readily, which John and I never did.

"We should have written off fifty percent of what was ultimately transmitted. John was reluctant to charge too far ahead with commissioning scripts which is why we didn't write off more than we did, though when it came to rewriting scripts, I had total freedom because it didn't cost John anything."

Byrne was paid for work done to date, but had little more involvement in the production of WARRIORS OF THE DEEP until the expiration of his six month U.S contract some time in Spring 1983. That left Eric Saward with a massive uphill task; pruning down four episodes that could easily have come out as forty-five minutes apiece in the studio.

Pennant Roberts sympathised with the story editor's problems. "It was meant to be a fairly complicated story, but it wasn't very good.. It didn't fit the **Doctor Who** mould on any level. I fancy it was a **Space 1999** script which had been translated into the **Doctor Who** format... It certainly had the appearance of being a space series which had been arbitrarily transferred underwater. It was just a lot of battles, one special effect on top of another."

Delivering scripts so early should have reaped a beneficial dividend, but in the run up to Christmas 1982 Eric Saward had more than enough on his plate, facing rewrites on the current season to cope with an escalating series of strikes at TV Centre, while fighting to complete his own Dalek story.

John Nathan-Turner's policy of not letting Saward commission too far ahead in case it ate into the annual budget without guaranteeing results, meant there was never a surplus of scripts "in the cupboard". By mid-January 1983, the time when Saward would seriously begin looking at Season 21's content, there were just eight storylines under various stages of consideration; three by Messrs Byrne, Pringle and Bidmead which would make it to the finish line, and five from Rod Beacham, Colin Davis, Andrew Stephenson, Christopher Bailey and Robin Squire respectively which would never make it past the part one script commission stage.

The problems Saward found with WARRIORS OF THE DEEP were that while it lacked substance and was severely over-length, it was workable enough to show more promise than its motley fellow contenders. Pinking shears in hand, Saward went to work.

Episode one lost the interior set of the Probe craft, its four-man crew and that fateful encounter with the Myrka. Another major cut was an early scene where Lieutenant Karina warns Nilson that Paul Maddox, the P.S synch operator, is becoming increasingly unstable. Nilson's concealed glee at hearing this news would have been an early clue for the audience that the character has a hidden agenda.

A major and significant loss was the scene of Maddox suffering a breakdown, going berserk, and only to be restrained and carted off to the medical wing after he has wrecked several control consoles. The end result is an unanswered question as to why, midway through part one, he is suddenly in the medical wing under sedation.

Several atmosphere-building bridge scenes went also west, as did the original set listed for the episode cliff-hanger. This would have taken place in an ultra-violet lit hydroponics garden, studded with giant glass tanks of vegetation.

Lesser amendments resulted in Silurians Scibus and Tarpok (previously denoted only as First and Second Companion) getting names, a sex alteration for Doctor Solow, a change of ethnic origin for Lt. Karina, and an anglicising of the first P.S synch operator's from Michel to Michael.

Part two lost a blatant attempt to entice older age-group viewers by contriving an reason for Tegan and Turlough to don skimpy beach attire as they hide from patrolling guards in a solarium. A reference to Sauvix wng differn armour to his colleagues was also chopped.

Interestingly, neither writer addressed the problem of reptilian continuity. In 1972's THE SEA DEVILS, following a barrage of letters from aggrieved viewers, Malcolm Hulke denounced the incorrect naming of the land dwellers as Silurians, preferring an equal misnomer, the Eocenes. In WARRIORS OF THE DEEP they consistently refer to themselves as Silurians. Similarly the term Sea Devils was a nickname first coined by a frightened construction worker aboard the sea fort. No proper name is ever advanced and yet, in Byrne's scripts, they are referred to as Sea Devils by their Silurian cousins.

Other continuity gaffs were spotted before rehearsals, predominantly by Ian Levine. Icthar names the Doctor as a "Time Lord from Gallifrey" despite the fact that Robert Holmes was still a good three years from giving the Doctor's home world a name in 1970. Icthar also mentions the TARDIS, even though it was never brought down to Wenley Moor. What was retained was the Doctor recognising Icthar as one of the Silurian rulers he encountered in that original serial.

Episode three lost least of all. The Myrka is named as a creature "part beast, part biological machine", and one of the combat marine walk-ons is given a name, Paroli. Unusually Saward also adds a short sequence set in a bunk room to bolster some plot information.

In episode four Saward took out some additional ventilation tunnel sets, an attack on the Doctor's party by two groups of converging Sea Devils, and Byrne's intention to spare the lives of Vorshak and Preston. This latter change, to emphasise the futility of conflict, was a late-in-the-day rewrite prompted by Pennant Roberts who wanted the finished serial to fore-ground a more overtly anti-war message than Byrne had originally intended. The only reason all

becomes quiet on the underwater front is that everyone apart from Bulic and the time travellers has been killed. Neither side has won a victory. The Doctor's epitaph line, "There should have been a better way" and his earlier pronouncements on some of humanity's less agreeable aspects were further anti-war additions by Saward and Roberts.

Saward's pen is also much in evidence where Turlough is concerned in the final episode. Feeling Byrne had misunderstood the youngster's duplicitous nature, he gave Strickson some additional lines making it clear Turlough would be willing to abandon his friends and flee if the going looked like becoming too perilous.

DIRECTOR AND TEAM:

For the first and only time John Nathan-Turner broke his own rules and engaged a director who had worked on the series under previous producers. It was not quite co-incidental that Pennant Roberts' appointment came shortly after he had granted the Production Office permission to use footage from his unfinished serial SHADA in the up-coming anniversary show, THE FIVE DOCTORS.

Roberts' first **Doctor Who** had been THE FACE OF EVIL for Philip Hinchcliffe in 1976, where he had participated in the casting of Louise Jameson as Leela. Three more serials had followed for Graham Williams, THE SUN MAKERS, THE PIRATE PLANET and the abortive SHADA. Once that serial had been abandoned Roberts went on to make episodes of the BBC police series **Juliet Bravo** and the prisoners-of-war drama **Tenko**. It was here that he renewed his acquaintance with Louise Jameson; casting her as Blanche. In the intervening years Roberts had also been instrumental in generating programmes for the Welsh language incarnation of Channel 4, S4C.

Absent from the previous season, Warriors of the Deep saw the welcome return of John Nathan-Turner's most preferred Designer, Tony Burrough. His last **Doctor Who** had been the period two-parter BLACK ORCHID, an inexpensive show which made scant use of his skills in creating multi-level "jigsaw sets". These had been his trademark on earlier **Doctor Whos**, THE KEEPER OF TRAKEN and FOUR TO DOOMSDAY, and would be very prominent again in this serial.

Two newcomers were the Costume and Make-Up supervisors, respectively Judy Pepperdine and Jennifer Hughes, but Visual Effects were allocated to one of the programme's staunchest long-term supporters, Mat Irvine. A native of Enfield in Middlesex, Irvine joined the BBC in the early Seventies and graduated to Visual Effects when a temporary summer appointment came his way. A keen learner with a penchant for model work, Irvine trained with two of the Department's most skilled professionals, Bernard Wilkie and Ian Scoones. His first official job on **Doctor Who** was helping with miniature filming for THE CURSE OF PELADON. Promoted to full Designer status in 1976, his first serial in that role was THE FACE OF EVIL, which introduced him to Pennant Roberts. Further liaisons with Roberts continued throughout 1977 as he, and Ian Scoones, worked to pull all the effects work together for the first season of **Blake's Seven**.

THE STONES OF BLOOD saw him back on **Doctor Who** in 1978, doing a story he much admired. Irvine was far less happy with his next show, THE CREATURE FROM THE PIT. An acrimonious argument with director Christopher Barry over the eponymous monster left him with deep reservations about creating floor effect creatures, responsibility for which always seemed to get dumped on Visual Effects after everyone else had decided they didn't have the expertise or the budgets to fund them.

Fortunately his next two productions, WARRIORS' GATE and the **K•9** pilot, A GIRL'S BEST FRIEND, were happier experiences, but at the time of his allocation to WARRIORS OF THE DEEP Irvine was away north of the border, working on a programme for BBC Scotland, **The Odd Job Man**. Consequently attending planning meetings became something of a problem...

Looking to make their marks during post-production were Radiophonic Workshop composer Jonathan Gibbs, working on his first solo **Doctor Who** after sharing honours with Peter Howell on THE KING'S DEMONS, and the ever loyal stalwarts of Dick Mills for special sound and Dave Chapman for electronic effects.

The line up of characters in Johnny Byrne's storyline originally had no openings for any lead actress parts, but all that changed after John Nathan-Turner prompted there should be a glamour angle to launch the new season. Ingrid Pitt was put up as a potential candidate for either Karina or Preston's roles, but when he realised the actress was available, Pennant Roberts insisted she be given one of the central characters. Correspondingly the role of the Sea Base's medical officer, Doctor Solow, was revised from male to female.

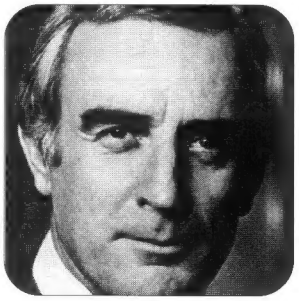
INGRID PITT Born in Poland just as the Iron Curtain was coming down over Eastern Europe, Ingrid Pitt spent much of her formative years in East Berlin, becoming fluent in German, Spanish and English. She left East Germany very abruptly when she mistakenly believed a squad of border guards where shooting at her. Jumping into the river dividing the two countries she managed to swim to the far shore and to a new life in the west.

A career in acting came her way almost as a sideline to a succession of jobs she undertook during the Sixties, jobs which included stunt arranging and bull fighting. Her first significant role was in a 1967 low budget science-fiction film made in the Philippines, *The Omegans*.

A year later a small but significant part in the war film *Where Eagles Dare* (1968) drew her to the attention of Hammer Films. Almost overnight she shot to stardom as one of Hammer's "Queens of Horror", landing leading roles in *The Vampire Lovers* and *Countess Dracula*, both in 1969. That same year she appeared in the portmanteau horror movie *The House that Dripped Blood*, appearing opposite Jon Pertwee just as he heard he was about to become the third **Doctor Who**.

Reportedly it was Pertwee who recommended Ingrid Pitt to Barry Letts for the role of Queen Galleia in the 1972 story THE TIME MONSTER, one of the few times she has ever played a role for television. In 1977 she narrowly missed getting the part of Servalan in **Blake's Seven**, losing out to fellow Hammer "scream queen" Jacqueline Pearce.

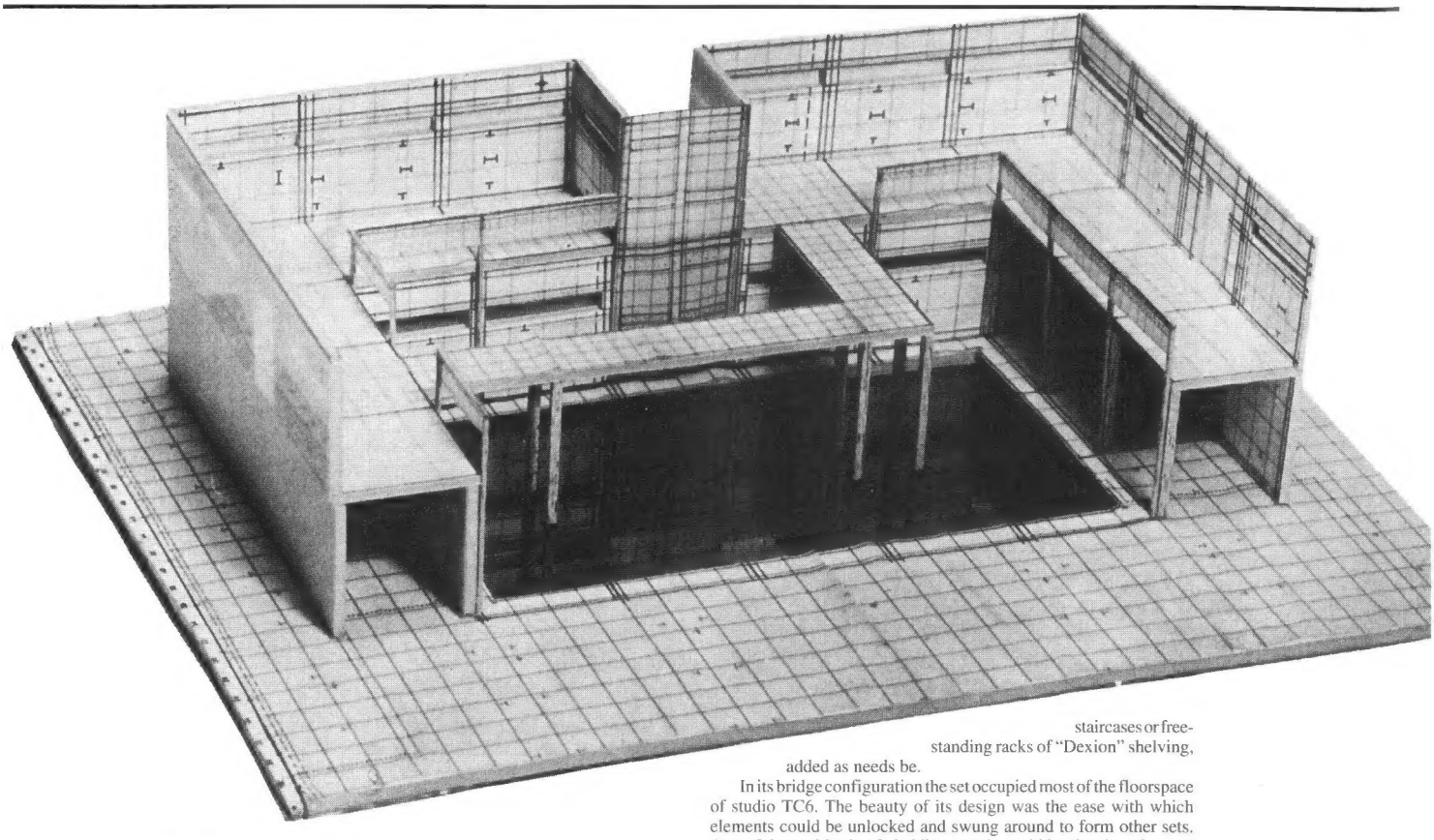
Other significant films to feature Ingrid Pitt include *Nobody Ordered Love* (1972) and Peter Shaeffer's *The Wicker Man* (1973). Significant stage appearances have been in *Don't Bother to Dress* (1978) and *Women of Straw* (1979).



TOM ADAMS Born in London, September 1938 Adams started his career with the Unity Theatre company in London after completing his National Service. He made his TV debut in an early episode of **Dixon of Dock Green** before moving to ITV for a semi-regular role in the hospital soap **Emergency Ward 10**. In the early Seventies he appeared opposite Paul Daneman, Julian Glover and Anthony Ainley in the highly successful BBC series **Spy Trap** where, for two seasons, he played Major Sullivan.

After **Spy Trap** Adams alternated between guest star and regular roles on both sides of the Atlantic. *Journey into Midnight, Madigan* and *The Lisbon Beat* are examples of the former, while as the latter he's best remembered for playing Bernard in Villains, Dr Wallman in **General Hospital**, Daniel Fogarty in three series of **The Onedin Line** and Nick Lewis in **The Enigma Files**.

Heroes and officers seemed to be Adams' stock in trade roles during a film career which peaked during the Sixties. His first significant part was in the 1963 war epic *The Great Escape*, followed in quick succession by appearances in *This is My Street* (1963), *Licensed to Kill* (1965), *The Fighting Prince of Donegal* and *Where the Bullets Fly* (as Bond pastiche Charles Vince) both in 1966, *Fathom* (1967) and *Subterfuge* (1968). By coincidence he preceded work on his last major film, *The Red Baron*, with a supporting role in *The House that Dripped Blood*.



staircases or free-standing racks of "Dexion" shelving, added as needs be.

In its bridge configuration the set occupied most of the floorspace of studio TC6. The beauty of its design was the ease with which elements could be unlocked and swung around to form other sets. Any of the multitude of cladding panels could be simply unhooked from their scaffolding support rails and repositioned to change the entire geography of the set. For the rescheduled first studio sections of the construction were re-jigged to become the PS unit, the bunk room detention area and, of course, the inevitable corridors.

The airlock area required a set of giant double doors specially made from sheets of foam rubber sprayed white. Due to the softness of the material these doors had to be build on frames, and yet light enough so they would not injure Janet Fielding as they fell on her from the impact of the Myrka's assault.

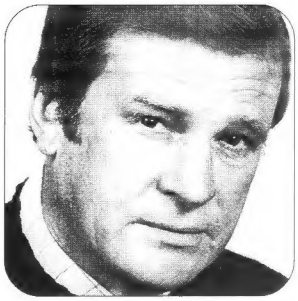
Another asset of this jigsaw set was its portability. It could be very easily dis-assembled by a scenic crew and put up in a new format within an hour. This benefited the location team who were able to transport a two storey section of the set down to Shepperton and erect it around a water tank for the Doctor's spectacular tumble into the reactor cooling baths at the climax of episode one.

The only drawback of this set was the highly reflective quality of its wall claddings. Under the bright studio lights the set gleamed, banishing all shadows. For better or worse WARRIORS OF THE DEEP would not so much resemble *Alien* as **Space 1999**.

Aside from the stock TARDIS set — which would occupy a much smaller corner of the studio than its debut outing in THE FIVE DOCTORS — Tony Burrough's other responsibilities were for the two views of Silurian/Sea Devil architecture; the interiors of the scout craft, and the caverns of the warriors' base.

The scout ship cockpit and the cave rampway to the airlock was one curved corridor set. "Jabalite", chemically treated to make it bubble and then painted, was used to provide the cave walls. A shallow stairwell led down to a sliding door, which had a small aquarium tank fitted behind the inspection panel window to permit shots of water supposedly draining away from the airlock.

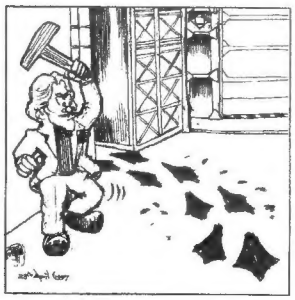
The Sea Devil dormitory was a much bigger, albeit false perspective, set. The main components were arched sections of wood flats covered in mixtures of plaster, fake stone and a fabric called Flotation paper. These units were erected on Stage A as a series of linked "W"s to give the impression, from a very restricted view camera position, of numerous alcoves wherein the dormant Sea Devils would be seen perched. A huge mirror, positioned left of camera sight would create the image of twice the number of Sea Devils waking.



IAN McCULLOCH Pennant Roberts' choice as Nilson was one of his established repertory company of actors. It was Roberts who, in 1974 suggested him to Terence Dudley for the lead role of Greg Preston in Terry Nation's post apocalypse series **Survivors**. He duly went on to appear in all three seasons of **Survivors**, although he was only in two episodes of the final series. Not content with just starring in the series, he contributed three scripts; A FRIEND IN NEED for season two, A LITTLE LEARNING and THE LAST LAUGH for season three, the latter being the episode which killed off McCulloch's character Greg Preston.

Prior to **Survivors** he established his name in TV series produced in Scotland, principally episodes of **Sutherland's Law** and **The Borderers**. After **Survivors** he made guest appearances in shows as diverse as **The Professionals** and **Hammer House of Horror**. Later in the Eighties he rekindled his links with Scotland, landing a part in the popular detective drama **Taggart**.

It was during one of the recording breaks between seasons of **Survivors** that McCulloch found himself at the tiller of a yacht, sailing in the English Channel with several show business friends for company, among them BBC director Lennie Mayne. At some point during the day their yacht was involved in an incident with another vessel, and in the ensuing manoeuvres to avoid a collision, Lennie Mayne toppled overboard and was drowned. The enquiry that followed exonerated McCulloch from blame — recording a verdict of misadventure — but spectres of the incident haunted the actor for a long time to come afterwards, and roles were thin for a long time before Pennant Roberts cast him for the part of the traitorous Scandinavian, Nilson.



SET DESIGN: Tony Burrough's showpiece for the serial was a magnificent two-story centre stage construction, capable of being broken apart and re-configured into a number of different shapes. Inspirations for its futuristic yet functional design were contemporary nuclear power stations for the walls and gangways, and NASA Mission Control for the layout of the consoles.

The basic structure was an assembly of scaffolding uprights and metal platforms linked together to form a set of chair shapes. As the bridge set two chair sections radiated out left and right from a central hub, hinging to make right angles. The top storey became a walkway with metal railings, underneath being a colonnaded corridor open on one side. An additional spur fed out from the back of the set to make the heart of the u-shaped central space "busier". The scaffolding was all clad with huge sheets of perforated hardboard, which worked as a peg-boards securing the metal veneer coverings of pre-cut and painted "Novolux" panels. Additional panels on runners acted as doors with various extra dressings. such as spiral

COSTUMES: The regular artists all wore their standard "uniforms", except for Janet Fielding who was given a multi-coloured off-the-peg dress with matching belt. Long before recording got underway John Nathan-Turner had expressed a wish to see the Doctor's garb modified somewhat. Although it would not happen in this story, one pivotal plot element would be a scene of the Doctor losing his original costume in deference to a radiation suit disguise.

Regular attire aside, everything else had to be tailor made. with much of it requiring greater than normal input from Visual Effects. Basically four categories of

DEEP SIXED

Few of the people involved with the production of WARRIORS OF THE DEEP have a good word to say about it. At best it is was style vanquishing substance. At worst, it is a Doctor Who that never should have been made. Was the story was just too ambitious for Doctor Who? Or were warnings which could have produced a season opener living up to the writer's ambitions ignored? JEREMY BENTHAM consults MAT IRVINE, who took so much of the blame for this show's performance, and attempts to find out.

THERE IS a story, possibly apocryphal, told about the BBC series **Red Dwarf**. When Rob Grant and Doug Naylor first went about pitching their idea to the BBC in 1984, they met with a representative from the Light Entertainment department in London. Having listened to the two young writers for close to an hour, and having digested their broad spectrum outline of a first season, the corporation's nominated assessor asked one single key question to determine the proposal's underlying merit. "Has it got a sofa in it somewhere?"

"Umm... Well, not as such..." was the cautious reply.

There then followed a lengthy sermon as to why all successful situation comedies had to have a "sofa" somewhere in the show's central structure for comic dialogue to take place. **Terry and June** had their settee, Captain Mainwaring had his swivel chair in the vicar's office, Alf Garnett had his sitting room, even the **Likely Lads** had their table by the bar. The upshot was a speedy departure from Television Centre by Messrs Grant and Naylor, with advice ringing in their ears to have another think about their concept. They did. They took it straight to BBC Manchester where it got commissioned in time for a first season broadcast in 1988. The rest, as they say, is history.

Nearly fifteen years has elapsed now since Mat Irvine, on behalf of the Visual Effects Department, went away carrying the can for the perceived travesty that was WARRIORS OF THE DEEP. The pain is still there, fuelled by memories that everything from script inadequacies to kung-fu Rhine-maidens, overlit sets to truncated recording schedules got focused towards the one tangible subject of everyone's antipathy: the monster in the rubber suit. Rarely has any programme so aptly found a scapegoat as **Doctor Who** found the Myrka.

"Most ironic" asserts Mat Irvine, "With the wisdom of years, and the fact that now I have a lot more experience of production and directing, is that it could have worked. If you accept that 'creatures' of all sorts have to be part of the **Who** set-up, there was nothing actually wrong with the Myrka. Most creatures seen in the cold light of day - all right, the cold light of a studio - are going to look a bit odd. But that's not how they are supposed to work as an element in a programme. It's the science, or the art, of making television. Let's shoot it tight, with fleeting glimpses, maybe just as a shadow...

"But that's not how the BBC worked in those days, although fortunately it seems to now. It's all a bit academic but *Alien* worked because you didn't really see the creature. **Doctor Who** was a case of, "Let's show it seams and all and then let's wonder why it doesn't work". As was quoted to me by one Director once, and we won't say which one, "We've paid a lot of money for this monster. We must see it!" Need I say more."

The true miracle of **Doctor Who** is that it lasted and succeeded for so long in spite of a corporate structure that was never really geared towards making it. As a series it was a nomad with no home it could ever comfortably cling to. Due to its original broadcast slot in the Sixties it got labelled as a children's programme, although it was never made by the Children's Department. It was a drama, but it was neither a play, a series or a serial even though it owed allegiances to all three.. Most alarming of all, as the era of total budget costings per programme dawned, was that it consumed time, resources and money faster than any other production staged by the BBC at a point in its history when it was still constrained by a rigidly inflexible system of programme making.

Eventually **Doctor Who** reached a point in the Eighties when the BBC drew a line underneath it; stating they could no longer afford to make the show by themselves to a standard expected by its audience. Mat Irvine agrees this was the case but, if anything, is amazed that it did not happen sooner. An issue, maybe, of a programme incompatible with the structure of its makers?

"Perhaps..." ponders Irvine. "Because **Who** was seen as such a flagship, you would have thought more money would have been made available than there ever actually was. I don't mean money counted in thousands of

costuming had to be considered; the humans, the Silurians, the Sea Devils and the Myrka.

The humans were the most straightforward to clothe. Everyone, except for Ingrid Pitt's character, wore cotton one-piece jump-suits. In keeping with the subconscious **Space 1999** parallels the costumes were dyed into specific colour codes to denote their duties.

Vorshak wore the only blue outfit, denoting his position as base commander. As Security Officer Bulic wore red, while the tactical crew dressed in military grey. The bridge officers wore tan uniforms with flashes on their shoulders and sleeves presumably to indicate rank. To enhance the appearance of these uniforms, matching grades of material were cut, sewn and dyed to make tabards with polo-neck collars, the outlines accentuated with coloured trim to stiffen and make them stand out. Some of the officers were also given gun holsters.

Doctor Solow's undercostume was cut from a white, more figure-hugging fabric. A matching white lab coat cut from a heavier, lined material, also with accent edging to cover up the Velcro seam, completed the ensemble.

To reduce costs many of the extras wore tan radiation suits hired from a costume warehouse. One humorous script amendment by Eric Saward was a stage direction that the suit borrowed by the Doctor had been previously worn by a crew member with a penchant for eating garlic. It was originally intended the "What have you been eating?" references would be a more recurring punchline than final shooting eventually delivered.

Having little experience designing monsters, Judy Pepperdine was happy to defer most of the operational overheads of creating the Silurian and Sea Devil costumes to Mat Irvine since they involved working with materials not commonly handled by the Costume Department. Her main input was an opinion that they should be dressed in armour rather than the string vest apparel of the original Sea Devils, or even stark naked in the case of the Silurians.

The Silurians were one hundred percent Mat Irvine's creation. None of the original Silurians masks from 1969/70 had survived and even the few colour photographs that existed did not show the shape of the back of the heads. At this time the only colour footage that existed of the Pertwee serial was a ropey 1975 domestic video recording in NTSC format. The task of sculpting new heads for the Silurians was delegated to a newcomer at the Visual Effects Workshop, Stan Mitchell. Working in clay Mitchell produced a master design which then went up to Richard Gregory's Imagineering group in Oxfordshire for moulding and casting.

Using sheets of textured latex rubber Imagineering cut and tailored the arms, leggings, feet and hands for the creatures, gluing and heat sealing the rubber components to store bought gloves, slippers and overalls to make it easier for the artists to put the suits on. The body sections, sketched by Judy Pepperdine, were manufactured in fibre-glass by Richard Gregory, the backplates featuring raised sections resembling protruding bones that would carefully match what Mat Irvine had imagined the backs of the Silurians heads to look like.

A significant departure from their 1970 counterparts was the functioning of the Silurians' third eye. Instead of being used as a control emitter or as a means of inflicting pain and even death, in this serial the illuminated eyes were used only as a means of visibly showing which reptile was speaking. As with Daleks the eyes pulsed in synchronisation with the actor's voices.

For the Sea Devils Judy Pepperdine was able to rescue a 1972 John Friedlander mask from one of the **Doctor Who** exhibitions. Due to its age and extreme fragility, and due to having been immersed in sea water, it proved no easy task to cast a good mould from this mask. The fins at the back were hardest of all to do as the thin latex webbing had almost completely rotted. Mat took a decision to tack them down

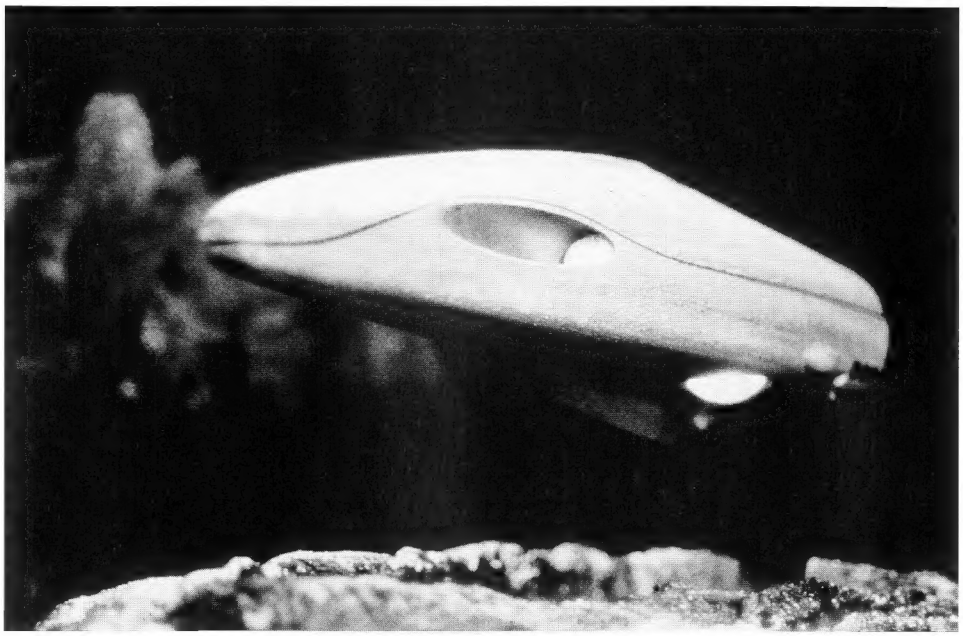
pounds either. I'm talking about money counted in hundreds. It was a terribly under-resourced show for what they wanted from it. In Effects you were not paid to get it right, you were paid to get it right first time, and every time.

"Part of the problem was **Who**'s legacy. It was a drama series from the Drama Department, and there has always been a feeling in the BBC that Drama, by its nature, could get away with not using Effects. They always understood that you needed sets, costumes and make-up, and to an extent they were easy to budget for. With **Doctor Who**, they started off without any proper provision for Effects and a budget for the whole show was duly arrived at on that basis. These days, shows like **Hitch Hiker's Guide**...and **Red Dwarf**, even though they're made by Light Entertainment, are costed with a substantial provision for Effects, but they then score over drama through having small casts and limited locations. **Who** tended to have large casts, lots of locations, and it needed lots of effects."

Even by **Doctor Who** standards WARRIORS OF THE DEEP was an intensely effects bound story. Whatever the truth of it being a reworked **Space 1999** script, the structure and operations of Sea Base Four certainly mirrored more the format of Gerry Anderson's multi-million pound stellar odyssey, but without that programme's dedicated, and funded, second unit team.

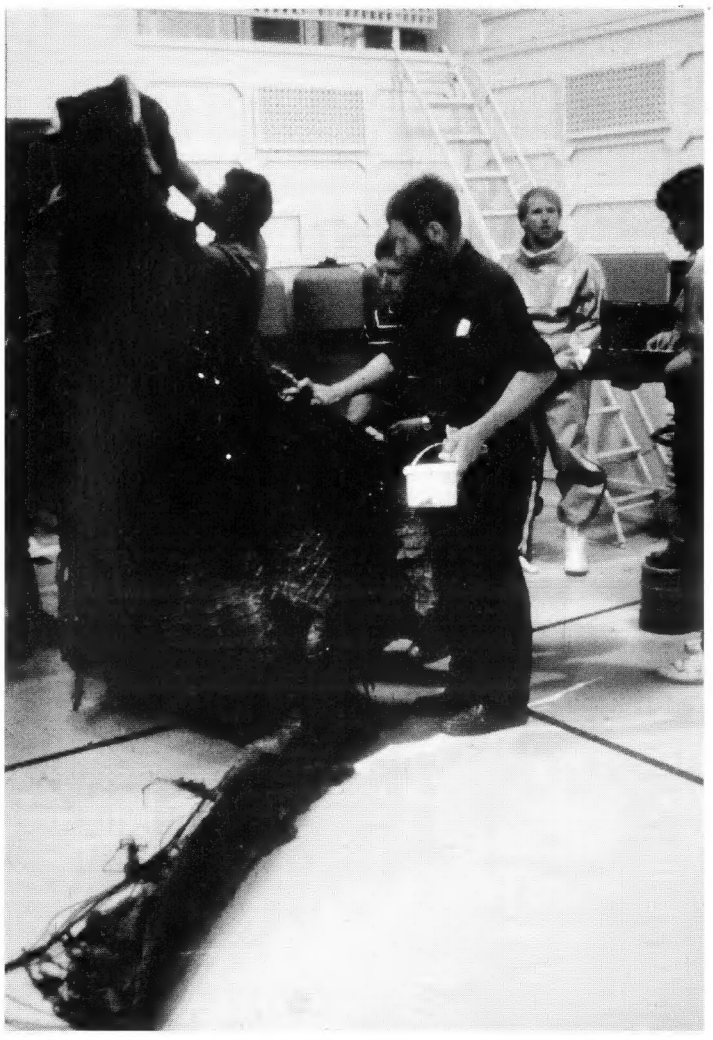
"We had a lot of miniatures" remembers Mat Irvine. "And a lot of special props that had to be built. Then there was all the liaison with the Costume department, and with Make-up too although I never understood precisely how the terms of reference were drawn up on this one. The BBC never had a dedicated Special Make-up unit, such as you would have on a film. Ordinarily, even on a **Who**, the demarcation lines between what was Costume, what was Make-up and what were Effects were easy to spot. Here, as far as the two humanoid aliens went, we had an arbitrary decision that Effects would supervise the design and moulding of the Silurian masks, and Make-up would handle the Sea Devil masks. Stan Mitchell sculpted up and cast my redesigned Silurians in-house, but Make-up asked Richard Gregory (of Imagineering) to produce the Sea Devils, possibly from an old mould they'd found."

Since WARRIORS OF THE DEEP was made in 1983 Mat Irvine has undertaken a Director's course, studied the process and mechanisms of television production, and left the BBC to form his own TV and movie making company, Small Space.. But the BBC too has changed dramatically in that period. Programmes are crewed and resourced on a needs basis rather than staffed on a rostered allocation of whomsoever happens to be available from the given department. Producers can ask for particular specialists and can choose where to spend their budgets. They in turn, however, must sign for and agree to pay the estimates of time, effort and money costed out by the Designer. In this matter, Irvine is quite categorical. "There is no way any Designer, or any servicing department, will go into a job nowadays without saying, "What do you want...? This will cost you so much.... You haven't got the money? Oh dear, you can't have it then. Perhaps we can do it differently, or maybe you can find some more money..." And it's surprising how television companies can find the money when they really want to."



The structure of BBC Television in the Eighties, by its own rigidly applied rules, just was not geared to coping with the problems WARRIORS OF THE DEEP encountered. When events in Scotland delayed Irvine's start date on the show, there was simply no-one else in the Effects department sitting around, waiting to step in as a substitute. Neither did Programme Planning have any spare studios sitting idle at Television Centre when a snap General Election call dictated an immediate need for space. Outsourcing the work was just not an option.

John Nathan-Turner could have taken the offered alternative and dropped the serial entirely (deferring was not on offer either) but that would have resulted in a season even shorter than the one he was facing. In the end the aspirations of Earth's former rulers were crushed by conservative rather than concerted action. A case of blues won, greens lost, and red faces all round too!



and fuse them to the skulls. If nothing else this made it easier to fit the Samurai-style war helmets proposed by the Designer. Again Imagineering did the construction work on these helmets, re-using and modifying the mould fashioned originally for the Gundans in WARRIORS' GATE.

Painted black instead of brown, the Sea Devil masks were worn just as before, like top hats with the actors seeing out through the neck. Two of the masks, including the one created for Sauvix, were enhanced with radio control fittings behind the eyes, with solenoids to make the eyeballs move on cue.. Unlike his Seventies counterpart, the Sea Devil leader did not have a mechanism fitted to make the mouth of the mask twitch.

The hands, arms, legs and feet sections were fabricated from the same sheets of textured rubber as the Silurians, but painted an oily black to match the masks. Their costumes were sketched by Judy Pepperdine and followed a Samurai motif in keeping with script references to them as noble warriors. Black and silver were the colours chosen for their knee-length tabards which buckled together around the ribs and waist to form a jerkin. Replacing the saucer-shaped guns of their 1972 appearance, Mat Irvine's team created new hand weapons for them. Essentially a torch battery compartment topped by a miniature parabolic dish reflector, the guns would light when the actors pressed a button. Six complete Sea Devil costumes were produced for the serial.

Faced with so huge a costume overhead, plus the fact Visual Effects were supplying so much of the expertise and effort needed to produce them, Irvine had to plot his team's workload carefully. Even with out-sourcing some work to freelancers, there was only so much one Designer and a few assistants could achieve in a day.

The Sea Devils were produced first, as it was originally thought they would be needed first on location. The Silurian costumes were next, and finally the Myrka.

Like the Skarasen the Myrka was intended to be an amphibious cyborg; a reptile in the vague shape of a stereotypical dragon. It was never intended to be large, just extremely sleek, fast and vicious. Johnny Byrne's notion was a creature akin to Giger's alien. Irvine and Pepperdine liked the idea but decided it would work best as something operated by two actors. Irvine's design was for a kind of walking fish; a long, sleek monster propelled along by four stubby feet.

With time, money and resources against them, his team of Effects assistants worked incredible hours to get the Myrka ready, especially once it was realised the monster's debut in the studio was being pulled nearly a fortnight. The latex, foam rubber and fabric body of the Myrka was constructed over a series of wooden hoops to give the body greater bulk. Stan Mitchell again worked on the head, making it something of a visual cross between a Silurian and a Sea Devil.

The big problem with the Myrka was simply time. Despite all the incredible overtime hours worked, the creature just was not ready for its scheduled debut in rehearsal. It arrived several days late, giving its operators virtually no time to practise before going live in front of the cameras. Several days earlier the Head of Visual Effects, Michaeljohn Harris, formally wrote to John Nathan-Turner asking him to withdraw it from the show, declaring the monster not to be up to the Department's own standards. Not a great fan of Visual Effects, Nathan-Turner's response was an adamant no. They would be expected to honour their commitment to the series and deliver as contracted.

Compounding the issue was the choice of who should operate the Myrka. Mat Irvine favoured using experienced puppeteers, but he was over-ruled by Pennant Roberts and John Nathan-Turner who favoured a cheaper option. Over in another studio the children's programme, **Rentaghost**, was being made, which featured two performers, William Perrie and John Asquith, who regularly appeared in the show's pantomime horse. As the horse tended to be fairly infrequently used in the show, there were long periods of time when the two performers were sat around doing nothing.

Nathan-Turner's proposal was to engage these two artists for an afternoon's recording session as the Myrka. This way he could pay lower fees as the actors were already receiving full-time remuneration for **Rentaghost**.

Unfortunately the Myrka was not ready for the first block of rehearsals, arriving just in time for live shooting with its fluorescent external paint still tacky to the touch. Another major blow was when the artist clad in the head section found it impossible to wear the suit as it had been intended. The sheer weight of the monster's head made it impossible to walk bent over into an L-shape. The only alternative was to walk just like a pantomime horse, with the head fully upright. Which is what they did...

MAKE-UP: While Visual Effects were working all hours God sent, Jennifer Hughes of the Make-up department was having a far easier ride.

Even the regular actors were less problematic than usual. Between completing THE FIVE DOCTORS and starting work on WARRIORS OF THE DEEP, Peter Davison had reprised his celebrated role as Tristan Farnon in a Christmas special edition of **All Creatures Great and Small**. Aiming for period accuracy Davison agreed to have his nearly shoulder length hair cut short for the part. By doing this he became the only Doctor so far whose hair grew shorter not longer with the procession of seasons.

Having no duties involving the Silurians or the Myrka, Jennifer Hughes was free to concentrate on the artists playing humans. For the mainstay of their appearances she picked up on early draft script references to there being a solarium-cum-hot house on Sea Base Four.

Consequently all members of base personnel were given healthy looking sun tans, visualised by ploughing on rich textures of foundation cream and colouring.

Doctor Solow's appearance was most striking of all; her golden sun tan counterpointed by colourful make-up around the eyes, emphasis on the eyebrows, and Ingrid Pitt's naturally long hair pulled back into a severe bun.

The Sea Devil heads would not normally have come Make-up's way, but with the Effects Department's budget and manpower overtretched and Make-up's under-used, it was decided Jennifer Hughes would fund and take charge of creating the Sea Devils, even though their realisation would again fall onto the shoulders of Richard Gregory.

VISUAL EFFECTS: Recalling his views on WARRIORS OF THE DEEP for memoirs published in ***Doctor Who Magazine***, John Nathan-Turner was positively scathing towards the Visual Effects Department and their contribution to this troubled story. "Of course, after the event there was a post-mortem, memos, apologies and all the rest of it..." he wrote. "But the fact remains we were let down badly by a department that failed to pay for its own mistakes. The Myrka wasn't added to the script at the last minute. We weren't late with the casting. There was no blame to be attributed to the production team itself."

Fairly or unfairly Visual Effects became the scapegoat for all the ills visited on this serial. But while the end result was unquestionably disappointing, how justified was it to focus so much blame into so narrow a beam.

It was purely co-incidence that Mat Irvine, the Designer who had worked on THE CREATURE FROM THE PIT, came to be haunted again by the spectre of producing a creature costume for a **Doctor Who** because no-one else felt confident enough to tackle it for the money available. It was simply his name on the departmental peg-board that showed him as available when the serial was allocated its design team.

Three things then happened which caused great impact on Irvine's fortunes. Firstly the show he was booked on before **Doctor Who** over-ran its production slot. Ordinarily this would be bad enough, but with the show based on location in Scotland, it meant the Designer was hundreds of miles away right at the time when key planning decisions on who was doing what for WARRIORS OF THE DEEP were being made. With nobody to argue their corner, motions to assign Visual Effects responsibility for building all the models, the special props, specialised set dressings (such as the PS unit, and the synch-operator's link-up station), fake airlock doors, masks, skins coverings and armour for all the Sea Devils and the Silurians, plus,

of course, the Myrka went through unopposed.

The second thing that happened is that Irvine was not replaced by Michaeljohn Harris once it became known his joining date had been shunted back three weeks. Arguably no other Designers might have been free to step in, but to date no adequate explanation for so apparent an act of inertia has been forthcoming.

So Irvine arrived back to find himself faced with an enormous project list, no additional budget, and precious little time to research what his fellow Designers were up to.

Thing number three that happened was the General Election call in mid-May and its scheduling shock-waves. The basic impacts on **Doctor Who** were pulling production forward by a week and swapping around the location and first studio dates. For Irvine's team these were absolutely disastrous consequences. The only way they had been able to manage their prodigious workload realistically was break it down into discreet tasks and work on the tasks in order of their appearance on film or in the studio.

The Myrka was originally not needed until Friday July 1st — or at the very least the Monday beforehand for rehearsals with the cast. All of a sudden it was needed by June 14th. Desperately the Effects team worked to realign their workload, but ultimately it proved impossible to squeeze a quart's worth of effort into a pint's worth of time. Delays ensued. The Myrka would not be ready for day one of rehearsals. Then day two. Studio work began on the Thursday and still no Myrka.

Viewing work in progress that morning, Michaeljohn Harris agreed with Irvine that not only was there a day or two's work still left to do on the Myrka, the beast would be unconvincing even when it was finished. Harris duly called John Nathan-Turner to request the monster not be used in the serial.

The Producer was not sympathetic. With no money in the production pot to pay for a full remount, and with Visual Effects likewise unable to underwrite the cost, Nathan-Turner had no option but to insist the department fulfilled its contractual obligation to deliver on time.

Mat Irvine and one of his assistants. Stuart Murdoch. worked solidly through the evening, night and morning of July 1st to get a monster ready for the afternoon's recording. It would not be a great monster, but there would at least be something for the cameras to look at.

In the final analysis the Myrka was the only Effects element in a story saturated with effects that failed to work. At the other end of the scale, the model work was far above the average for a **Doctor Who**.

Unaware of what Tony Burrough was planning, Irvine's designs for Sea Base Four were drawn very literally from the writer's original conception; an interlinking network of tunnels and airlock stations

fashioned to look like an assembly of submarines joined together. The Silurian scout craft, built by professional model-maker and long-time Gerry Anderson fan Martin Bower, was a homage to the prow of Gerry Anderson's celebrated underwater vessel, **Stingray**, with a curved snout and view ports instead of missile tubes. For tracking shots the craft flew on a pylon, supported from below and diametrically opposite the camera's point of view. For the sequence of it swinging round to dock, the pylon was replaced by overhead wires which also carried current down to power the ship's lights.

Mat Irvine himself built the small unmanned probe craft using cannibalised parts from a commerically available *Star Wars* X-Wing kit. The model was filmed by simply dropping it through the ocean door panel which in turn was facing the ground. The camera was aimed at a mirror positioned on the floor.

These scenes, plus the Sentinel Six space views, were shot on expensive 35mm film at the Visual Effects Department's own model stage at Western Avenue, Acton. With a further nod to **Stingray**, the models were filmed on a dry stage, the camera shooting through a top-lit foreground positioned fish tank. Strands of coloured gels attached to an office fan fixed in from of a spotlight added the rippling water effect.

PRODUCTION DIARY

14th June 1983: Tuesday. The 21st season of **Doctor Who** gets under way after a shorter than usual break caused by the special circumstances of THE FIVE DOCTORS. For the regular cast this is their first meeting since the 'end of term' party on March 31st. Peter Davison has nominally signed up for the year, while Mark Strickson and Janet Fielding's annual contracts expire mid season. For all of them June will be a testing time...

This meeting is the first readthough of WARRIORS OF THE DEEP and takes place at the Acton Rehearsal rooms. Had it not been for the election this read-through would have been followed by walk-through rehearsals for a three day film shoot. Instead it became the first of a ten day rehearsal period (including rest days) for the first studio session.

15th June 1983 Rehearsals continue at Acton. Before the General election call in May this date was to have been Day One of the planned film shoot at Ealing Studios; on Stage Three which incorporates the water tank. With Block One recording now pulled forward there just is not the time to prepare and shoot two days at Ealing and get in sufficient rehearsal time before a two days session in the recording studio. In a move almost without precedent in **Doctor Who**, John Nathan-Turner agrees to an unusual split of studio then film then studio for Johnny Byrne's four parter.

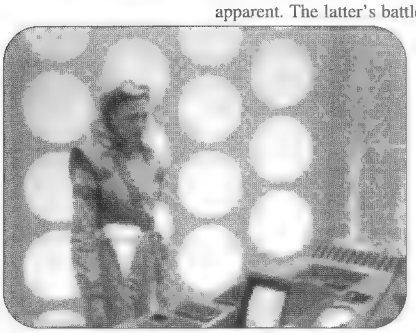
20th June 1983 A Monday Ante-prepenultimate rehearsal day for the first studio and the on-plan date when the Myrka costume should have been ready for its introduction for the two **Rentaghost** actors playing the creature. Originally today would have been the first day of studio rehearsals.

23rd June 1983 A Thursday. Overnight studio TC6 has been configured with sufficient of the main jig-saw set rig to accommodate Solow's medical bay (aka the PS unit). Other parts of the supporting gantries are bolted together and clad to form the corridors leading to Airlock One.

Present for Day One, Studio One are all the main cast, except for Nitza Saul (Karina) and the Myrka artists, both of whom are still in wait for a first try out of their costume. The Myrka itself is a very late arrival, driven up from Western Avenue still minus its final coat of green paint. With hardly any time for rehearsal William Perrie and John Asquith pull on their leggings, slide their arms into the creature's fin arms and get fitted with the main body of the monster. To everyone's consternation it is immediately obvious the actor at the front cannot take the strain of walking stooped forward, bearing the weight of the Myrka headpiece. He will have to walk upright, if only to see where he is going. The costume is dis-assembled and entrusted back to Visual Effects.

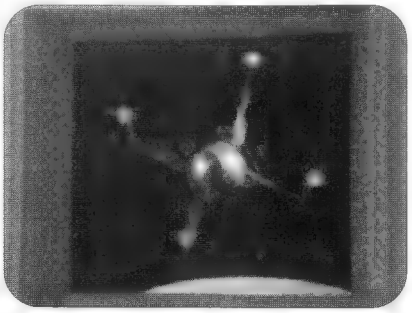
Shooting begins at 14:00 with all the sequences inside the PS unit, including Maddox's reprogramming by Solow and Nilson. As with many other specialised props required by the script, the PS system was a tailor-made product from Visual Effects.

With these few scenes complete, focus moves to the Airlock Five corridor for the main set piece of the day; the reptilian invaders bursting through the hatch-way and attacking the defending troops. As was common on a **Doctor Who** sequence of this nature, the scenes were shot rehearse-record; running through the action once or twice for the cameras before shooting it "live" for VT. It was only now that some of the limitations of the Silurian/Sea Devils became apparent. The latter's battle helmets were heavier than anticipated and tended to squash the soft rubber of the masks downwards, making it difficult for the actors to see out. In the case of the Silurians, a build up of heat in the studio began warping the only-recently-completed chest and back-plate sections, revealing the actor's necks underneath the masks. Studio heat levels also made breathing difficult for some of the actors playing the monsters. Pennant Roberts reduces "live" shooting time as much as possible to minimise discomfiture, but even so what has been conceived as a fast-moving battle scene becomes instead shorter sequences of Sea Devils shambling along in their slippery webbed-feet shoes, hardly able to see, occasionally colliding with each other, and having to pause and be fed oxygen through air hoses if the actors became dizzy or faint.



The final segment of the day takes place on the stock TARDIS set, recording, in story order, all the scenes for episodes one and two. Telecine footage of the time traveller's encounter with Sentinel 6 is fed to the TARDIS scanner screen, while the computerised displays are feeds from a BBC micro computer, programmed with the graphics.

24th June 1983 Overnight the scenic crew has re-set and redressed the main set, changing Airlock Five into Airlock One. The principal change is a widening of the corridors to make it appear more as the base's main freight airlock. The collapsible, soft rubber doors are also in place. None of the Silurian cast are needed this day, and only two Sea Devil warriors plus Sauvix are on set.



Yet again the Myrka prop is late in arriving, Effects Assistant Stuart Murdoch having put in yet more extra hours to modify the costume nearer to what the artists can work in and perform. Behind schedule already, the AFM harries the Effects assistants as they begin spraying the creature with its final coat of paint.

The main airlock battle scenes destined for episodes two and three are scheduled in story order, starting with the defenders taking up their positions. Controlling his camera shots as tightly as possible Pennant Roberts shoots the moment as the doors cave in and the monster makes its entrance.

In later interviews Roberts would describe this day as his worst experience ever working on a **Doctor Who**; desperately trying to do everything in close-up while minimise any full views of the Myrka. Conscious of the time penalty he has incurred, all Myrka scenes are done together, with none recorded more than once.

Ingrid Pitt has only one scene scheduled for today, and ironically it is her death from the electrocuting sting of the monster. Her one other duty earlier in the afternoon had been a Press photocall with Peter Davison to promote the new season, but major newspapers ran the story. Keen to try and inject some excitement into her death scene, Pitt ad-libs the moment of confrontation with a display of the actress's own martial arts skills. Whatever feelings there are in the gallery towards this stunt, there is no time to set up an alternative, especially after an enforced recording pause is called when someone notices Janet Fielding's outfit has become marked with paint from the still tacky Myrka! There are no tears when the creature itself perishes and is dragged from the studio.

The last scenes of the day take place in the detention area, yet another redressing of the main set, as Turlough's group make their escape by the accepted means of crawling out through ventilation ducts. A few more episode three, non-Myrka, corridor scenes conclude Block One's recording schedule, which wraps a quarter of an hour late at 22:15 with a hefty bill for overtime.

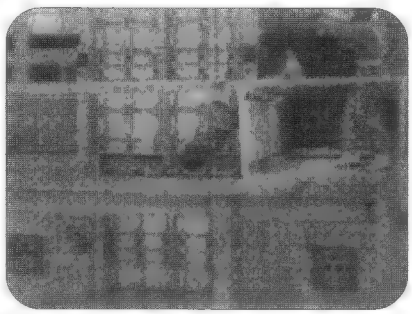
27th June 1983 A Monday. The enforced cancellation of filming at Ealing has left Pennant Roberts and Tony Burrough without a sound stage and water tank to film scenes that cannot be accommodated within Television Centre. With no other dates available at Ealing within the show's production time span, Production Associate June Collins has no other choice but to look elsewhere for facilities.

Other film studio sites are possible but none of them has a glass-sided water tank the **Doctor Who** team can use. A compromise is eventually struck, but it means splitting location work between two sites. One advantage gained is that the team no longer needs to rely on the services of a film crew. Booking an Outside Broadcast (O.B) unit instead will enable scenes to be shot quicker by permitting a multi-camera set-up.

Just after midnight an electrical scaffolding crew arrives at Shepperton Studios in Middlesex to begin preparing the interior of Stage A for an O.B shoot. This is the first time a **Doctor Who** set has been erected at Shepperton since *Daleks: Invasion Earth 2150 AD* completed production there in 1966. The crew is joined at 04:00 by the Design Department's scaffolding crew, and by the scenery team at 08:00. Preparations for filming will continue throughout the day.

Meanwhile, at the Royal Engineer's Diving Establishment, Marchwood — a Ministry of Defence site near Southampton — another rigging crew arrives at 14:00 to start putting up all the scenery and lighting needed to simulate the interior of a cooling tank.

28th June 1983 By mid-morning the production crew has been joined by Peter Davison, and stuntman Gareth Milne.. Davison is the first to endure getting wet. With an Army diver on stand-by in case of emergencies, Davison clambers into a clear sided portable hydro tank for his one shot swimming underwater. The camera, outside the tank, never even gets damp.



Back at the main clear tank Gareth Milne steps into the Doctor's shoes for two shots of the Time Lord struggling underwater, and then finding an airlock hatch closed by a pressure wheel.

The final shots of this brief recording day are two close-ups of the Doctor pulling himself into the airlock. These are tricky sequences to orchestrate as a portable O.B camera, plus its lighting extension, has to squash into the back of a decompression chamber and capture the Doctor in close-up hauling himself into the room.

Both cast members are released by 16:00. Pennant Roberts, the production team and the O.B unit completes packing up and migrates to Shepperton to deposit their kit overnight in readiness for Day Two.

29th June 1983 On site for a coach pick-up from TV Centre at 07:30 are Peter Davison and Gareth Milne, Mark Strickson, Janet Fielding, Nigel Humphreys (Bulic), two walk-on actors dressed as Marines, the three Silurian actors, Christopher Farries (Sauvix) and two non-speaking Sea Devils. At Shepperton Stage A, around three sides of the sound stage's shallow water tank sections of Tony

Continued on page 16

HOLED BENEATH THE WATERLINE

What went wrong with Warriors of the Deep? Everything, decides Diane McGinn — but principally, the BBC.

IN-VISION's subtitle is *The Making of a TV Drama Series*. As such, WARRIORS OF THE DEEP is a more than usually important issue. Once the background to its production becomes clear, it almost becomes a textbook example of how things shouldn't be done. The extent to which the sudden changes in production schedule exascerbated the problems is obvious, but even without that things were seriously wrong.

It's traditional for an **IN-VISION** review to look on the bright side, and explore the elements of a story which made it worth trying, however disappointing the end result might be. The odd thing is that that's not too difficult in the case of WARRIORS OF THE DEEP. It doesn't take an overly active imagination to look at each element of the story and see how they could have worked, yet the whole is an order of magnitude worse than the sum of its individual flaws.

There's an intriguing sub-text underlying the script. The build-up to the air-lock attacks by Sea Devils and Myrka is superbly paced, creating a real sense of expectation as the doors swing open to reveal the enemy (a point which makes WARRIORS OF THE DEEP a classic example of Boucher's Fendahl Principle: *Never spend too much of your story building up your monster*). The model work's great, the music's atmospheric, and provided one wobbling door is stuck from the memory, the sets are quite magnificent. Even the cast provide some effectively subtle playing, at least from the supporting actors. Nigel Humphreys' Bulic is a case in point. There's little meat to the character as written — he's simply the 'dutiful second-in-command' — but Humphreys introduces subtle little additions (such as his understated grimace of distaste as he actually seals Tegan and the Doctor into the airlock, an effective contrast to his zealous insistence that's the only thing to do) which sketch out a man behind the uniform.

Unfortunately, such plus-points hardly matter when the viewers' attention is focused on Ian McCulloch's scenery chewing villain, some gaping plot holes, and of course, the Myrka.

The major problem is the clash between the approaches of writer and director. It's most noticeable in the casting, where the choice of actor, or rather actress, sometimes undermines the whole point of the character as laid down on the page.

There's a lot to be said for casting against type, just as there's something to be said for casting star names, though Ingrid Pitt is more a cult figure than the mainstream star needed to attract a BBC1 audience. Certainly, Pennant Roberts scored a noticeable success by casting Michael Keating in **Blake's Seven**, despite the fact that Keating's height should have made him far too tall to play the weaselish Vila convincingly. Similarly, his established policy of casting women when a writer's included a generic supporting character (such as the Gatherer's assistant Marn in THE SUN MAKERS) is more than admirable. Just as the writer has unthinkingly assumed a character has to be male unless there a reason they shouldn't be, so the audience can be mislead into assuming an extra depth by the sheer fact that that *she* isn't. Heinlein challenged the same assumptions in *Starship Troopers* by neglecting the mention the central character's dark skin for several hundred pages (and then making no use of it whatsoever; it doesn't matter to the characters, so why should it matter to the reader?), and that **Doctor Who** could do it, even on the smallest scale, is a mark in its favour.

Unfortunately, while re-sexing a blank canvas is one thing, Solow's sex-change is an unmitigated failure. In the novelisation, Terrance Dicks includes one telling line as Solow hides Karina's corpse: "For all her medical

experience, Solow had never realised how heavy a body was before." Surely that should be the key to her character — Solow isn't a natural killer, and isn't quite sure how her principles led her to become one. Given the Cold War, balance of terror analogy underlying the story, her inspiration is clear: she's a commentary on Bruce Kent, the then head of CND who was routinely labelled a 'Dupe of the Kremlin' in the days when Michael Heseltine donned a flak jacket to tour Greenham Common. In theory, Solow brings that accusation to exagerrated life, presenting a character so disgusted by the prospect of nuclear war that her — or rather his — other principles could be undermined by an experienced infiltrator like Nilson. Undermining the Sea Base's capacity to commit mass murder... well, surely that was merely her moral duty? If doing so meant commiting treason, then wasn't her loyalty to the human race more important than mere nationalism? And if, once she was in too deep, it meant commiting murder? Well, there's the balance point of an interesting character.

It might be a trite, inaccurate and — applied to any one individual — libellous portrait of the early 1980s anti-nuclear activist, but the 'Innocent Dupe' was certainly an element of the era's political mythology, and would have provided an intruiging new twist on one of **Doctor Who**'s stock figures — the misguided, well-intentioned traitor. Instead, Ingrid Pitt's performance is too young, too confident, and above all too obviously villainous. That's a point which applies to Ian McCulloch's Nilson as well, and undermines the Sea Base's credibility as a functional military establishment (that something as crucial as Sea Base Four wouldn't have better selected staff is embarrassing, though the infiltration of two experienced spies is arguably more credible than the assignment of a closet pacifist).

This is doubly unfortunate, as by making events a matter of black and white, with clear-cut heroes and villains, Solow and Nilson undermine the moral ambiguities essential to any encounter with Homo Reptilia and turn the serial into a straight-forward battle between humans and monsters. That's doubly unsettling in retrospect, now the Earth Reptiles have become a staple element of the New Adventures' version of future history. But even without this, it leaves the serial trapped on the contradiction between the bright, hi-tech sets and a story increasingly dependent on tension and darkness.

That, of course, is the scenario suggested by the script. In retrospect, the designer's rationale for producing a hi-tech establishment worthy of NASA rings a little false considering the deriliction of the former Soviet Union's nuclear facilities, where staff are often left unpaid and maintenance goes by the board, but the global background provided by the script is unfortunately inconsistent.

On the one hand, the situation seems to be a frozen balance of terror run by hi-tech cold warriors caught in a routine where alerts are so regular the actual war could begin almost un-noticed. That certainly parallels the reality of the early 1980s, with the regular alert runs and the Sentinel security satellites echoing the days when Soviet bombers would test the West's resolve by approaching national air-space, and flocks of geese could trigger a move to Def-Con 2. But if that's the case Nilson's actions make little sense. Eliminating Sea Base Four does little to protect the enemy while (at least) three of its fellows remained intact and ready to rain retaliation from the skies, and might just trigger a war — it's an openly provocative act, and one out of keeping with the implied situation, and the underlying warning about the ease with which one accident could trigger the ultimate conflict.

On the other hand, if Sea Base Four were a rusting installation, the product of a super-power on the point of collapse, then its loss might prove significant, and the lax vetting of its staff would be credible... but such a scenario is more in keeping with Skaro's long war of attrition. It doesn't fit with WARRIORS OF THE DEEP's emphasis on a realistic notion of the brief, instantly apocalyptic nuclear war.

But whatever the rationale in story terms, WARRIORS OF THE DEEP needed to be dark if it was to work as a battle between humans and monsters. That it isn't means the production stands and falls solely on the quality of those creatures.

Now it may well be that there are dozens of occasions when two-man costumes have made convincing monsters, but I couldn't think of any myself. That the result would be an un-co-ordinated pantomime horse seems a more reasonable conclusion. It seems equally incredible that Visual Effects could have written requesting that the Myrka be dropped from the serial, but this perhaps indicates something about the BBC's culture at the time. Perhaps other series could have made other arrangements so close to production, so Visual Effects had fulfilled their obligations by warning the producer of problems in advance. Just because the monster is an integral element to any **Doctor Who** story, one which could only be omitted when the story was first outlined, wasn't enough to win the series any special arrangements.

The pity of it is that the Myrka is utterly un-uncessary to the plot — it's a monster which has been included purely so there's a monster to showcase. It could have been removed from the initial idea without harming the story at all, and even the scripted idea of a fast, Giger-esque killer was an accident waiting to happen so far as a low budget, video-taped series was concerned.

If Visual Effects can be forgiven for failing to deliver the impossible where the Myrka was concerned, and given cautious praise for some passable Silurians, the Sea Devils are more problematical. The rationale for producing a sequel is, at base, to exploit the good memories evoked by the original, and the Sea Devils were certainly the source for a good number of those. It's unlikely that any of the general public recalled the Silurians, but the image of tortoise-like heads emerging from the water to pursue the Doctor and Jo through a minefield was one of childhood's defining icons for the sixth formers of 1984. The news that the Sea Devils were back might just have reclaimed them from more teenage activities and given them a chance to rediscover the show — but not if they came away convinced (to coin a phrase), that the memory cheats, and that Jon Pertwee's **Doctor Who** only seemed good because they were six...

In their original serial, the Sea Devils are fast — everything Byrne's script wanted the Myrka to be. Clever direction on dark sets combined with an ingenious design to create that rarest of creatures — one which could chase you, and *catch* you. It was partly down to the vague impression of long-limbs which the ingenious top-hat design of the masks created, and partly the sheer freedom of movement the actors enjoyed thanks to the minimalist costumes: latex painted boiler suits topped by net vests. Instead, the WARRIORS incarnation of the creatures are lumbering beasts restrained by their armour, whose long necks seem out of proportion to the rest of their bodies once the fins at the back are tacked down. The thought comes irresistably to mind: *I can understand that things don't always work, but this time they only had to replicate something which had been tried successfully ten years before.* In many ways it's a situation unique to **Doctor Who**, as few other series have ever had the opportunity to delve back into their past in such a manner, but again it's one which indicates something about the BBC Culture — somehow Judy Pepperdine wouldn't have been doing her job properly if she'd simply raided the files and reproduced her predecessor's work on THE SEA DEVILS, any more than the designer of ATTACK OF THE CYBERMEN thought it appropriate to duplicate the original TOMBS.

Unfortunately, this ambivalent attitude to the past is also noticeable in the script. It provides no explanation of the Silurians' background — the assumption seems to be that the audience knows who they are, and understands their origins. It's an omission which is striking in a story with the pretensions towards meaningfulness implied by the nuclear subtext — the casual viewer's given no reason to see them as anything but inherently hostile aliens, so Icthar's talk of past treacheries, the Silurians' moral codes and humanity's dedication to violence must have seemed mystifying. The dedicated fan knows better, but is then alienated by the pointless slips in continuity. The third eye's the most obvious, but that pales in comparison with the rewriting of DOCTOR WHO AND THE SILURIANS which occurs. It's almost impossible to imagine the Doctor and Ichtar are discussing the events shown onscreen — the whole point of THE

SILURIANS was the underlying moral equality of humans and reptiles. Both sides turned to genocide almost as a first resort, undermining WARRIORS' talk of the Silurian moral code, while the Doctor's relationship with the Scientist was hardly the deep, trusting friendship implied here. Even the notion of the Silurian Triad is a new concept, as the original hardly suggests that the three speaking Silurians make up some formal governing body, let alone one with influence stretching beyond Wenley Moor.

Almost as irritating are the moments when characters' motivations and attitudes change from scene to scene purely to keep the plot ticking over. In episode one, The TARDIS has been damaged by its encounter with Sentinel Six (something of a continuity slip initself), so the Doctor decides he'd better clear their presence with the base commander while he makes repairs. That might be a good idea, given that the Doctor's already pointed out they've landed in a highly sensitive military establishment, and if the TARDIS is damaged, then maybe it wouldn't be safe to just sit inside. Yet throughout the rest of the plot the words 'You'll be safe back in the TARDIS' recur time after time. Similarly, the Doctor starts off by assuming the base commander will just accept his bona fides and let him repair the TARDIS, yet as soon as Tegan trips an alarm they start treating escape as a matter of survival: it's so important it's worth setting the base reactor on overload simply to create a diversion. Turlough assumes the Doctor's been drowned within seconds of his hitting the water (and seconds later the Time Lord's swimming like Duncan Goodhew), and Ichtar and Sauvix adhere to the Geneva Convention whenever it's convenient for the plot. Much of this is down the heavy editing the script required, but it's difficult to avoid the conclusion that whole sub-plots such as the reactor debacle should have been removed entirely so the rest of the story had sufficient room to stay coherent — though when the lynch pin of the plot proves to be a plot device as blatant as the convenient properties of Hexachromite gas, perhaps coherency is the last thing we need.

Once you start, it's easy to pick holes in any production, and WARRIORS OF THE DEEP is certainly no exception. Through no fault of the production team, it was produced under the worst possible circumstances, and the disaster of the Myrka shone a spotlight on its flaws. But they go much deeper, and raise a disturbing question. Was WARRIORS OF THE DEEP a unique occasion, or are such fundamental flaws lurking beneath the surface of every **Doctor Who**? If they are, then the series' achievement in disguising them as often as it did is really quite astonishing.

I•V

Burrough's jigsaw set have been put up, plus a projecting pier section out over the water. Visual Effects are on hand to make the water buble by tipping quantities of dry ice into the tank.

All the scenes to be shot this day lead up to and follow the episode one cliff-hanger as the Doctor attempts to stall Bulic's marines from catching Tegan and Turlough. He stumbles in the attempt and lurches against the railing. The next shots, after a brief pause to swap positions, is of the companions running to elude their pursuers. The final shots before dinner are the spectacular sequences of Gareth Milne tumbling from the catwalk into the bubbling water below, and of him floating lifeless to the surface.

The evening session up to 22:00 belongs to the reptiles. All scenes aboard the Silurian scout craft are shot in the small L-shaped cockpit set. With less heat and more controlled lighting, these scenes show the Silurian and Sea Devil costumes off to their best. And the costumes all fit perfectly too!

30th June 1983 The only artists required for this final day of O.B shooting are the nine Silurian and Sea Devil performers. Eight scenes are lined up to be recorded, two by the airlock door of the Silurian scout craft, and the remainder in the ice chamber housing the dormant Sea Devils.

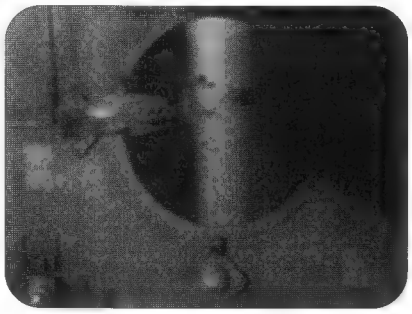
To simulate water draining out of the airlock to the undersea base, Visual Effects fits a box filled with water behind the hatchway's inspection panel. Lit by a green light to suggest the sea, the water is drained out of the box on cue to simulate air being forced into the chamber.

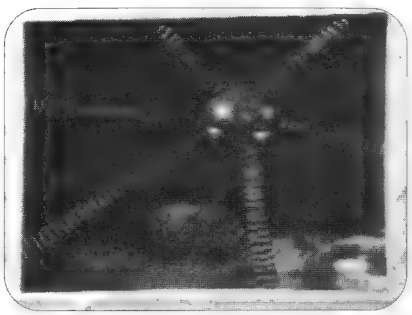
The Sea Devil revival sequence is all shot in story order and this is the only time the Sea Devils are shown without their Samurai war helmets. Their ranks swelled to twelve by the strategic placing of a large mirror, the warriors are shown at various stages of their revivification by subtle changes in lighting; dark grey and cold for their dormancy, bathed in white light to trigger the awakening, and finally suffused by a pink glow suggesting a warm radiation. 19:00 is the rostered time for recording to wrap.

1st July 1983 Slated as a standby day in the event of problems, it is not needed. Had it not been for the General Election call, this date would have been the second of WARRIORS OF THE DEEP's first studio.

2nd July 1983 A Saturday. Eleven days of rehearsals begin for the second studio. Although Block Two will see the serial back on its original timetable, Pennant Roberts has to make some tactical changes to the running order in order to recover some of the budget he has blown by the over-run on Block One, Day Two.

4th July 1983 Model filming gets under way at Visual Effects on their purpose built model stage. Peter Wheeler is the cameraman for this four day shoot which is supervised by Mat Irvine. Because of the high profile of the models in this story, and because it is intended to shoot several scenes of the Sea Devils walking along the sea bed, permission is given for the unit to shoot using 35mm film. As well as the various action scenes of the space station, the sea base and the scout ship, Irvine's team also shoots a number of sea bed backgrounds that will be required in the second studio block for mixing with live action CSO shots of the Sea Devils. Model filming will continue daily until July 7th.





13th July 1983 A Wednesday. Studio TC6 is again the venue for this second, three day block of recording. Tony Burrough's two storey set has been put up in its entirety and dressed as the bridge of Sea Base Four, with the computer bank area behind the rear of the scenery, where the corridors were last time.. An additional element, off to one side of the set, is a framed CSO screen onto which will be matted either telecine fed model footage, or simulations of the missile launch procedure graphics, again taken from a computer program running on a BBC micro. During these practice runs the Lighting Manager (TM1) is cued to alter the set's overhead lighting in accordance with the levels of alert: green, yellow and red.

No Silurian or Sea Devil performers are needed on this first day. Originally Roberts planned to cover their absence by only shooting bridge scenes for the first three episodes, but on reviewing his schedules he found their was time enough to shoot all the episode four material that didn't include the invaders.

The running order kicks off at 19:30 with all the non-complicated bridge scenes for episode one, and then proceeds in story order right through to part four. As this is a short day, the Director shoots all the computer bay scenes while the scenic crew moves the main monitor screen into position. The very last scenes of all return the action to episode one for the missile launch drill, sequences which require precise timing as the actors and the lighting staff have to take their cues from the computer graphics running up in the gallery. Viewing on a monitor, the AFM uses hand signals to direct people on the floor.

One of the centre-pieces of the set is the Synch-Operator's chair — another piece of work from Visual Effects. The various electro-mechanical gizmos on the chair, such as the dome, are not in fact electrically powered. A member of Effects has to crouch behind the chair, just out of camera shot, to operate the rig.

14th June 1983 A full day with a 10:00 start for camera rehearsals. All the reptile actors are present, but absent from today is Ingrid Pitt. All her scenes until late on in Day Three are now in the can.

The bridge is again the focus of attention as recording begins at 14:00 with Turlough's interrogation scene in part two. Next up, and again in story sequence, is all the material for the last episode as the Silurian led raiders take over the bridge.. Recording these scenes takes the best part of Day Two, culminating in the creatures' deaths and the Doctor's telling epitaph, "There should have been another way!"

Make-up gets a rare chance in this story to shine, applying a dark foundation to Peter Davison's face to show the effects of his exposure to the synch-operation equipment. The blue sparks that surround his head while encased in the dome are done live in the studio by mixing images from a spark generator into the picture.

Having crammed all the non-Silurian episode four bridge scenes into Day One, a gap has opened in Day Two which Pennant Roberts fills by moving up the chemical store scenes that had initially been booked for Day Three. A recording break allows the scenic crew to remodel half of the bridge set into the storeroom by stripping out the control consoles and replacing them with (lightweight) gas and fuel cylinders.

Visual Effects supervises the sequences where jets of carbon dioxide gas burst from punctured tanks, killing the warriors by hexachromite asphyxiation. Larger quantities of dry ice will be used tomorrow for more general shots of the gas flooding the base.

15th June 1993 Day three dawns with the jig-saw set yet again reconfigured. This time the tanks and cylinders of the chemical store have been replaced by racks of shelving and boxes for its role as the base's storage chamber. The TARDIS police box is among the set dressings, and this is its only appearance in the story. There is a short delay to proceedings when the production team realises they have not left enough space in the layout for the police box prop to be wheeled in an out. The problem is cured by removing some of the foreground racking.

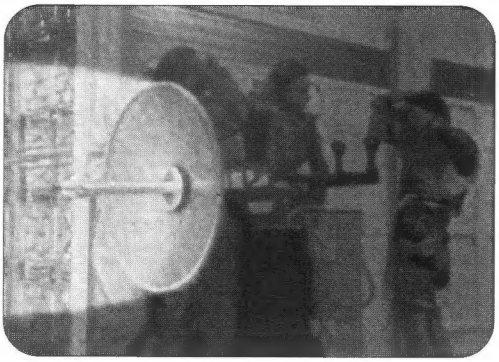
Shooting the inevitable **Doctor Who** corridor scenes occupies most of the rest of the day, however, many of these sequences are heavy with effects requirements. More dry ice is needed for additional Sea Devil death scenes, and Mat Irvine is kept busy assisting with close-up shots of empty warrior masks spurting trickles of green goo from an out-of-vision stirrup pump. The Myrka too makes a brief re-appearance, although thankfully only as an empty costume in the background of a scene where the Doctor uses the UV lamp weapon to rescueTegan from Nilsen.

Pauses while Effects set up for the many insert shots of dying Sea Devils impact the running order, and as the clock approaches ten o'clock there are still some crucial corridor scenes to do. Reluctantly John Nathan-Turner has to agree to another over-run, but instructs the team to cut anything they can. The main casualty is footage of the warriors marching across the sea bed. As part of model filming, Irvine's team had shot much establishing footage on 16mm of the ocean bed and the zone around the Sea Base. The aim was to assemble several composite shots of Sea Devils, recorded against a blue CSO background in the studio, matted against telecine backgrounds. All this was lost in the drive to finish as early as absolutely possible. In the end, WARRIORS OF THE DEEP wrapped at 22:30.

POST-PRODUCTION: The bulk of the gallery-only day involved Pennant Roberts going through the footage with a fine tooth comb, covering up any technical problems caused by the haste with which some scenes had been shot.

In this, Quantel was his greatest asset. By using its digital zoom-in facility Roberts was able to mask such faults as a microphone boom being visible during Nilson's death scene, or Mat Irvine creeping into shot during a sequence with the synch-op system. Quantel proved supremely useful in reducing long-shots of a less-than-convincing Myrka to tight close-ups on something intended to convey menace. He was only partially successful with this endeavour...

Thanks to so many mechanical props and Effects from Irvine's team — including torch guns for the Sea Devils and smoke charges in the victim's chest to show impact — there was a minimal need for optical effects from Dave Chapman. The electrocuting zap from the Myrka's touch was done simply by flaring the picture briefly to white., while a bordered purple wash was overlaid over pictures where the UV weapon is fired.



The editing process enabled Roberts to go further in pruning out shots he did not want. He also used rapid sequences of jump cuts to obscure opportunities for the audience to study the Myrka's appearance too closely.

Staying Afloat...

THERE WAS almost a mood of hangover surrounding the launch of Season 21. As far as **Doctor Who** was concerned, 1983 had been a blaze of parties, mutual back slapping and BBC self congratulation that had somehow managed to last from April to November. But now it was all over and as post New Year's Eve revellers blearily consulted their *Radio Times* for the first full week of the broadcasting year, there was no escaping one conclusion drawn from the last six months' Press releases. Those faces setting out aboard the TARDIS in January would bear no resemblance those gathered around its control console by the end of March.

So how much did committed, or even casual, viewers know about **Doctor Who**'s future as 1983 tripped over into 1984?

The first hint of changes coming surfaced as far back as June 1983 when it was leaked that Janet Fiedling would be leaving the series next year. Her annual contract had fallen due for renewal and privately John Nathan-Turner knew Peter Davison was getting itchy feet about staying with the show now he was entering his third season. Determined not to face a situation of the regular crew switching 'en masse', he planned a phased approach, just as he had successfully managed back in 1980.

Janet Fielding would be the first to go, signing a three month production contract that would see her released by the end of September. The subsequently urgent search for her replacement concluded when the newspapers revealed on July 5th that 21-year old Nicola Bryant would be the new assistant, appearing early in the new year. Touted as "the series' first American companion" Bryant was actually as much a British citizen as any of her predecessors.

Pegged to debut in the story following Janet Fielding's departure, her arrival would be timed to co-incide with Mark Strickson leaving. The ***Doctor Who*** *Appreciation Society*'s newsletter, *Celestial Toyroom*, first revealed this announcement in their July issue. The story generated little public interest firstly, because male companions seldom did, and secondly, because there was no mystery about his replacement. John Nathan-Turner was acceding to his Script-Editor's pleas to trim the companion list down from two to one. Even the robot Kamelion was being cleaned out of the cupboard as well.

There was major interest when journalists were invited to an early morning photocall on July 28th to hear that Peter Davison would be stepping down from the title role in 1984. While not quite the front page story Tom Baker's retirement had been, Davison's announcement rated a slot on BBC Television news and at least page three status in most of the national dailies next day.

Speculation as to his replacement ran for three weeks, with Nathan-Turner gaining media mileage by repeating his hint that the next Doctor could be a woman. For a brief period around August 1st it looked as though reporters had stolen a march on the BBC by divulging that 45-year old Brian Blessed would be Doctor number six. The Daily Mail was especially keen on this story, having once before tipped Blessed for the part when rumours abounded that Tom Baker might be leaving the series in 1977.

The real announcement, on August 19th, that the coveted role had been won by a relatively unknown, 40-year old actor named Colin Baker again made the BBC's nine o'clock news, and photographs from this well-attended Press call were just in time to be included in the ***Doctor Who*** *Twentieth Anniversary Special* publication from *Radio Times*.

The downside as far as Season 21 was concerned was that, having produced a souvenir edition in September and a cover article for the anniversary celebrations in November, *Radio Times* was not willing to give prime focus to the series again for its launch week in January. Indeed, almost the opposite occurred and promotion was less than for any previous **Doctor Who** season. The opening night rated only an inch's worth of column space in the listing page for January 5th, with only the by-line of "New series" to advertise its status. Friday's listing showed an improvement, featuring a full cast list (including Martin Neil's name printed twice) and a photograph of Ingrid Pitt from her Press call.

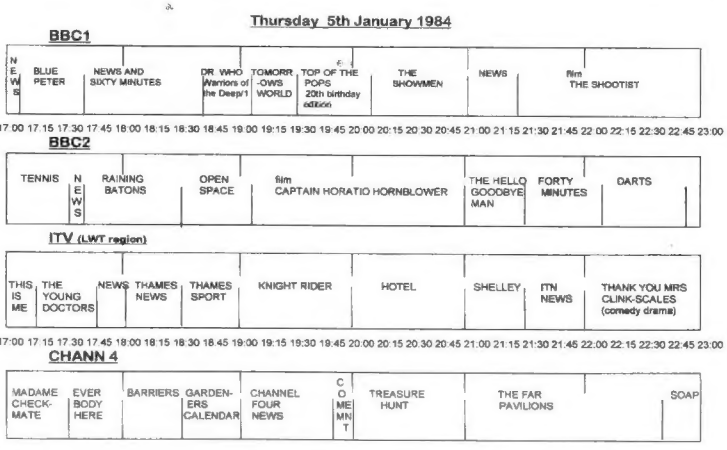
More disturbing was the absence of any teaser information about the story. Traditionally penned by the Producer, these per-episode blurbs had reduced over the years from a heyday full paragraph plus artwork in the Seventies to a single bullet-point question in the Eighties. The dropping of these teasers was not popular with the readership and their absence would be for the duration of this season only.

Unusually the BBC had little to offer for its new season, which made the underplaying of **Doctor Who** all the more puzzling. Their major drama production, **The Thorn Birds**, was easily surpassed by ITV's **The Jewel in the Crown**, and their newest series, **District Nurse**, failed to make anything but a modest impact. **Jim'll Fix It** and **Little and Large** occupied **Doctor Who**'s old Saturday slot, and the only new BBC show which did create a ripple of interest in those first few months was an import from the States, **Remington Steele**, starring Stephanie Zimbalist and future James Bond, Pierce Brosnan.

Ratings for the new season showed a marginal improvement over Season 20, although with opposition from the likes of **Open Space** (a community television project), **Gardener's Calendar**, a programme on fishing and various regional magazine programmes, it was easy to see why.

Figures per episode of 7.6M, 7.5M, 7.3M and 6.6M set the trend for the season. Thursday's figures were noticeably higher than those for the Friday broadcasts. Placings were better too. Where ARC OF INFINITY had attracted an average chart position of 78th nationally, WARRIORS OF THE DEEP saw a rise to number 66.

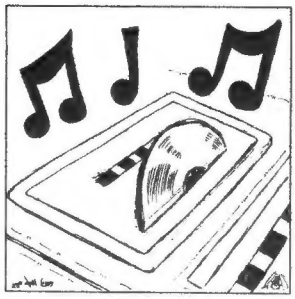
Not quite a flying start, but certainly a good one. But could this momentum be maintained?



CUTS:

Despite the excessively overloaded rehearsals scripts first submitted by Johnny Byrne, a combination of Eric Saward's rewriting and Pennant Roberts' problems with over-running studio days led to the edited episodes actually coming in slightly under the 24' 30" optimum length.

Some of this can be blamed on the Myrka. While it is true sight of this beast was pruned to an absolute minimum by judicious editing, much of what emerged on screen was a result of Roberts' fast jump-cutting between shots. A lot of his camera footage was used, but never for very long. Although not as fast paced as, for example, THE LEISURE HIVE, WARRIORS OF THE DEEP owed more to the faster pace of action-adventure drama making than its more ambling predecessor, THE FIVE DOCTORS. The money — and sometimes the lack of it — was all there on screen.



MUSIC:

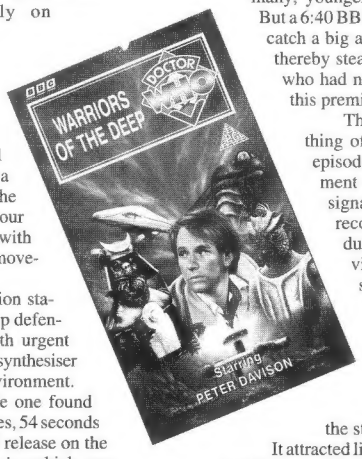
Having had his hand held to an extent by Peter Howell on THE KING'S DEMONS, the Radiophonic Workshop's latest recruit, Jonathan Gibbs, received his first solo **Doctor Who** commission with this story.

The style of his incidental cues was musical punctuation for the action rather than constructing themes. Relying solely on synthesisers and an electronic drumkit, he tailored his compositions to suit the type of scenes they were underscoring.

Sea Base Four was thus established with series of muffled bass phrases, almost like heartbeats, to evoke a sense of being deep underwater. Scenes with the Silurians and the Sea Devils tended to favour slow, ponderous passages of music in line with these creatures' tendencies towards measured movement.

On the other hand, battle scenes or "action stations" jump cuts of marines rushing to take up defensive positions were musically enhanced with urgent martial music, scored towards the higher end of synthesiser frequencies to suggest a hollow, metallic environment.

The majority of Gibbs' cues for episode one found themselves segued together into a three minutes, 54 seconds passage of continuous music for commercial release on the second album of ***Doctor Who*** — *the Music*, which was released on cassette and vinyl LP record by BBC Records in February 1985.



SPECIAL SOUND:

As well as responsibilities for creating the usual range of gun, communicator and instrumentation sounds commonly associated with a futuristic **Doctor Who**, the Radiophonic Workshop's main overheads on this serial were creating the special voices for the Silurians and Sea Devils. Strictly speaking they were being asked to recreate what had been done in the Seventies.

Brian Hodgson and Ray Angel had devised the unique guttural warble of the Silurians back in 1970; carefully feeding back a distorted rendition of the actors' lines through a ring modulator, adding reverberation and increased gain to the output signal to make it sound harsh. The same technique was also used for the growling of the Primords.

For whatever reason, the original equipment used to do this voice juggling was no longer available, and so Dick Mills employed a Vocoder to modulate the voices instead. One problem was cueing the voices to the picture. The actors playing the Silurians had spoken their lines normally in the studios, but their voices had not been recorded as part of the serial's main sound track. To show the cameramen which of the three creatures was due to speak next, each Silurian actor could press a button concealed in his palm and illuminate the light in his third eye. Only once he had finished his lines would he let go the button.

On July 18th and 19th the three Silurian actors, plus Christopher Farries (Sauvix) attended dubbing sessions at TV Centre to have their modulated voices added to the soundtrack. When it came to synchronising their dialogue, however, the actors found they were having to string their sentences out longer than was natural to fit the time their third eyes were illuminated. The end product was therefore a trio of very slow speaking Silurians.

The Sea Devil voice was less of an issue. There were no visual symbols to hint when Sauvix was speaking other than a slight nodding of the head, so Farries was able to dub his lines at a more normal tempo. Due to the technology being similar, his voice was very close to the results achieved in 1972.

TRANSMISSION:

Having experimented with other days of the week in previous years, Programme Planning moved Season 21 into Thursday and Friday evening slots for the majority of its run in 1984. With Jonathan Powell determined to launch a high profile, audience grabbing soap opera in 1985, a high priority was being attached to finding the right niches for this twice weekly show which would eventually bear the title, **EastEnders**.

The Thursday/Friday option was a big gamble. Being the end of the working week Friday evenings were traditionally low viewer nights as so many, younger people especially, went out. But a 6:40 BBC1 slot could be early enough to catch a big audience before they left home, thereby stealing a march over the commercial channels who had never previously thought to experiment with this premise.

The master recordings of this serial were something of a first for **Doctor Who**. Previously every episode had been recorded using analogue equipment on 2" video tape to capture a high quality signal. The recent emergence of high-spec digital recorders had freed programme makers to produce the same picture and sound quality on 1" video — which represented a considerable cost saving to the BBC. WARRIORS OF THE DEEP was the first **Doctor Who** serial to be made this way and, arguably, a reason why light levels in the studio had been kept so high to maximise signal strength.

Episode one went out nation-wide on Thursday 5th January 1984 at 6:40 p.m., the story concluding a week later on Friday 13th. It attracted little fanfare and has not, to date, been repeated on UK terrestrial television. Johnny Byrne declined his option to novelise the serial for the Target book range, so Terrance Dicks got the task by default. The hardback was published in May 1984, and a paperback edition followed in August. The cover artwork, by Andrew Skilleter, was re-used when Silva Screen Records produced a CD version of ***Doctor Who*** — *The Music II* under the title THE FIVE DOCTORS in November 1992.

A ninety-minute TV movie version was produced for distribution to the USA in 1985, while the serial was released on BBC Video in 1995, alongside its 1970s predecessor, THE SEA DEVILS.

CONTINUITY:

The Silurians operate controls aboard their scout craft and in the cavern manually. In the Seventies serial they used their third eye to actuate their technology. Neither was any reference made to the third eye being a weapon anymore, even though Icthar is supposedly the same creature the Doctor knew as the Silurian scientist at Wenley Moor.

The character names created by Johnny Byrne deliberately obscure which power bloc actually administers Sea Base Four. In the novelisation, Terrance Dicks names it precisely as a Western Bloc installation

TRIVIA:

Karina's dead body is not "seen" by the camera when Preston discovers her at the beginning of episode three. It is only implied he is looking at the body. This avoided having to pay actress Nitza Saul for an additional appearance in another episode..

On July 5th Christopher Farries asked to be released early from the production, as he was due on set for a feature film later that day. One of the Sea Devil extras played Sauxix for the remainder of recording.

The computer voice aboard Sentinel Six is not credited to any performer in the script. It is thought to belong to one of the Silurian actors.

WARRIORS OF THE DEEP

Series 21, Story One
Serial 130, Code 6L
Episodes 610-613

Cast:

The Doctor	Peter Davison
Tegan Jovanka	Janet Fielding
Turlough	Mark Strickson
Commander Vorshak	Tom Adams
Bulic	Nigel Humphreys
Nilson [1-3]	Ian McCulloch
Solow [1-3]	Ingrid Pitt
Preston	Tara Ward
Maddox [1-3]	Martin Neil
Karina [1-2]	Nitza Saul
Icthar	Norman Comer
Scibus	Stuart Blake
Tarpok	Vincent Brimble
Paroli [1-3]	James Coombes
Sauvix	Christopher Farries

Small and Non-Speaking:

Seabase Four Marine Guards	Dana Miche
	Julian Hudson
	Barney Lawrence
	Peter Caton
	Julian Larousse
	Rosa Pridmore
	Dorothy Ottey
	Ridgewell Hawkes
	Trevor Steedmore
Seabase Four Personnel	Joanna Garcia
	Ling Tai
	Joycea Goborn
	Arnold Lee
	Russell Brook
Sea Devil Warriors	Steve Kelly
	Chris Wolff
	Jules Walters
	Mike Brayburn
	Dave Ould
Double for the Doctor	Gareth Milne
Myrka	William Perrie
	John Asquith

Crew:

Title Music by	Ron Grainer
	and the Radiophonic Workshop
Incidental Music	Jonathan Gibbs
Special Sound	Dick Mills
Production Assistant	Norma Flint
Production Manager	Michael Darbon
Assistant Floor Manager	Adrian Hayward
Studio Lighting	Peter Smee
Technical Manager	Alan Arbuthnott
Studio Sound	Martin Ridout
Video Effects [1-4]	Dave Chapman
Video Effects [3]	John Mitchell
Vision Mixer	Nigel Finnis
Videotape Editor	Hugh Parson
Camera Supervisors	Alec Wheal
	Bob Baxter
OB Camera Supervisor [1-2]	John Baker
OB Sound [1-2]	Alastair Mitchell
Engineering Manager [1-2]	Alan Woolford
Costume Designer	Judy Pepperdine
Dressers	Stephen George
	Alan Brewer
	Richard Bateman
	Camilla Gavin
Make-Up Artist	Jennifer Hughes
Visual Effects	Mat Irvine
Visual Effects Assistant	Stuart Murdoch
Properties Buyer	Roger Wood
Designer	Tony Burrough
Design Assistant	Michael Trevor
Production Secretary	Jane Judge
Production Associate	June Collins
Writer	Johnny Byrne
Script-Editor	Eric Saward
Producer	John Nathan-Turner
Director	Pennant Roberts

OB Recording: 27th - 30th June 1983.

Recording: 23rd - 24th June 1983, TC6.
13th-15th July 1983, TC6.

Transmission:

Part One:	5th January 1984, 6.40pm BBC1 (24'48", 18.41.-- - 18.--.--)
Part Two:	6th January 1984, 6.40pm BBC1 (24'04", 18.41.-- - 18.--.--)
Part Three:	12th January 1984, 6.40pm BBC1 (24'02", 18.41.-- - 18.--.--)
Part Four:	13th January 1984, 6.40pm BBC1 (24'25", 18.41.-- - 18.--.--)

Audience, Position, Appreciation:

Part One:	7.6m, 51st, 65.
Part Two:	4.5m, 93rd, 64.
Part Three:	3.7m, 107th, 62.
Part Four:	4.0m, 102nd, 65.

I•V

Books & Literature

DICKS, Terrance: ***Doctor Who:*** *Warriors of the Deep.* (WH Allen, 1985)
HOWE, WALKER: *The Fifth Doctor Handbook* (Virgin 1995)
HOWE, STAMMERS, WALKER: *Doctor Who - the Eighties* (Virgin, 1996)

Theatre

Don't Bother to Dress (1978)
Women of Straw (1979)

Cinema

Alien (1979)
Countess Dracula (1969)
Fathom (1967)
The Fighting Prince of Donegal (1966)
The Great Escape (1963)
The House That Dripped Blood (1969)
Licensed to Kill (1965)
Nobody Ordered Love (1972)
The Omegans (1967)
The Red Baron (1969)
Subterfuge (1968)
This is My Street (1963)
The Vampire Lovers (1969)
Where Eagles Dare (1968)
Where the Bullets Fly (1966)
The Wicker Man (1973)

Television

All Creatures Great and Small (BBC, 1978-80, 1983, 1985, 1987-90)
Blake's 7 (BBC, 1978-81)
The Borderers (BBC, 1968-70)
The Day After (ABC, 1983)
Dixon of Dock Green (BBC, 1955-75)
Doctor Who (BBC 1963-89, 1996-...)
Emergency Ward 10 (ATV, 1957-67)
The Enigma Files (BBC, 1980)
General Hospital (ATV, 1972-79)
Hammer House of Horror (ITC, 1980)
The Hitch-Hiker's Guide to the Galaxy (BBC, 1981)
Journey into Midnight
Juliet Bravo (BBC, 1980-85)
The Likely Lads (BBC, 1964-66)
The Lisbon Beat
Madigan
The Odd Job Man (BBC Scotland, 1983)
The Onedin Line (BBC, 1970-80)
The Professionals (LWT, 1977-82)
Red Dwarf (BBC, 1988-93; 1997-...)
Rentaghost (BBC)
Space: 1999 (ITC, 1975-77)
Spy Trap (BBC, 1972-75)
Survivors (BBC, 1975-77)
Sutherland's Law (BBC, 1972-76)
Taggart (STV, 1983-...)
Tenko (BBC, 1983-85)
Terry and June (BBC, 1979-87)
Threads (BBC, 1985)

Doctor Who

Arc of Infinity
Black Orchid
The Creature from the Pit
The Curse of Peladon
Earthshock
The Face of Evil
The Five Doctors
Four to Doomsday
The Keeper of Traken
The King's Demons
K•9 and Company: A Girl's Best Friend
The Leisure Hive
The Pirate Planet
The Sea Devils
Shada
Doctor Who and the Silurians
The Stones of Blood
The Sun Makers
The Time Monster
Warriors of the Deep

Music

Doctor Who - The Music II (aka *The Five Doctors)*

I•V